NO. 3

MARCH • 1957

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textile bulletin

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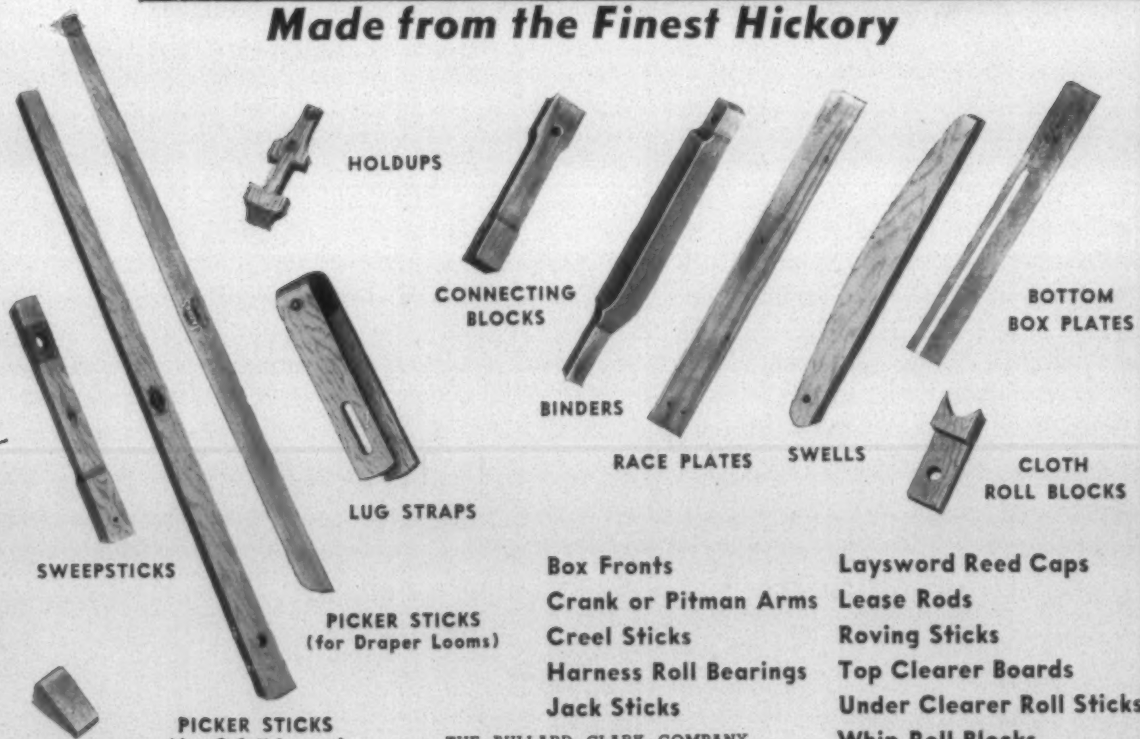
PA NBP

LOOM NECESSITIES

Made from the Finest Hickory



Box Fronts
Crank or Pitman Arms
Creel Sticks
Harness Roll Bearings
Jack Sticks

Laysword Reed Caps
Lease Rods
Roving Sticks
Top Clearer Boards
Under Clearer Roll Sticks
Whip Roll Blocks
Whip Roll Shaft Bearings

THE BULLARD CLARK COMPANY

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

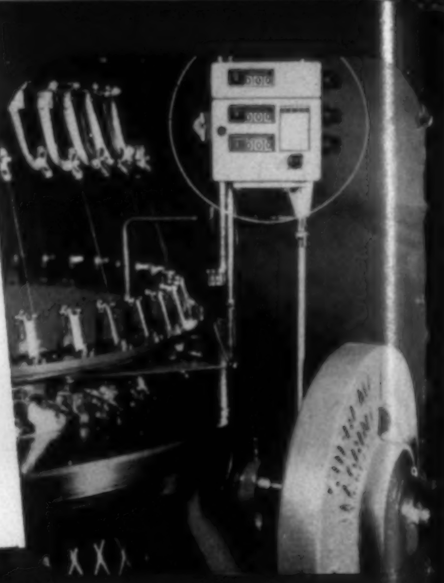
NORTHERN DIVISION
Danielson, Conn.

In KNITTING (as in Weaving and Spinning) you have to COUNT to get Accurate COUNTROL of Production and Costs

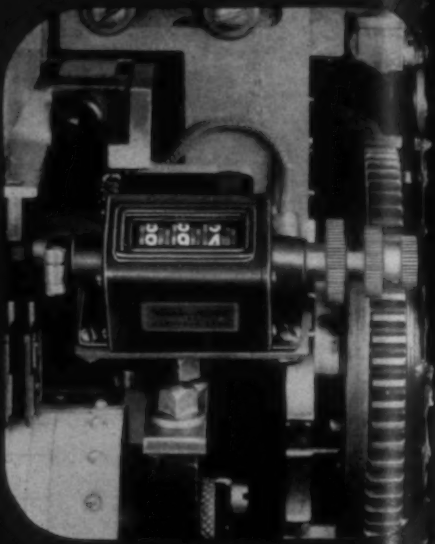
3-Shift Revolution Counter.

Every knitting machine . . . in fact, every process in every knitting mill . . . needs to be under a modern system of Veeder-Root *Count*rol. This system can be shaped to your own needs . . . so you will have a continuous, up-to-the-minute check on production scheduling . . . costs . . . quality . . . lengths . . . over-runs . . . shortages . . . and any other facts in figures you may need.

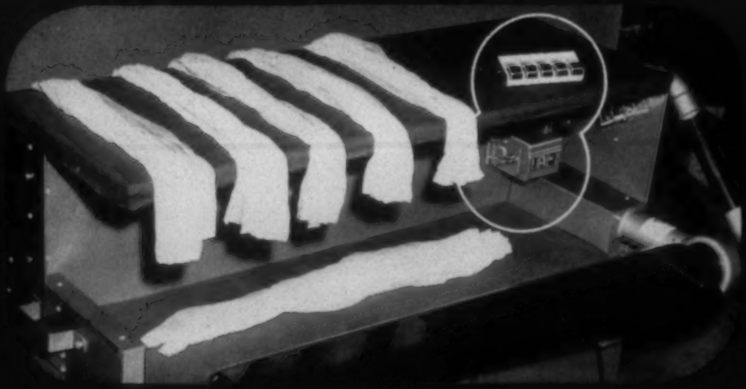
Remember, paperwork doesn't mean a thing, *unless you have accurate Countrol.* And you can count on Veeder-Root to help you in every possible way. Write:



3-shift Revolution Counter on Supreme Knitting Machine.



Small Subtractive Predetermining Counter on Philadelphia Jacquard Knitting Machine.



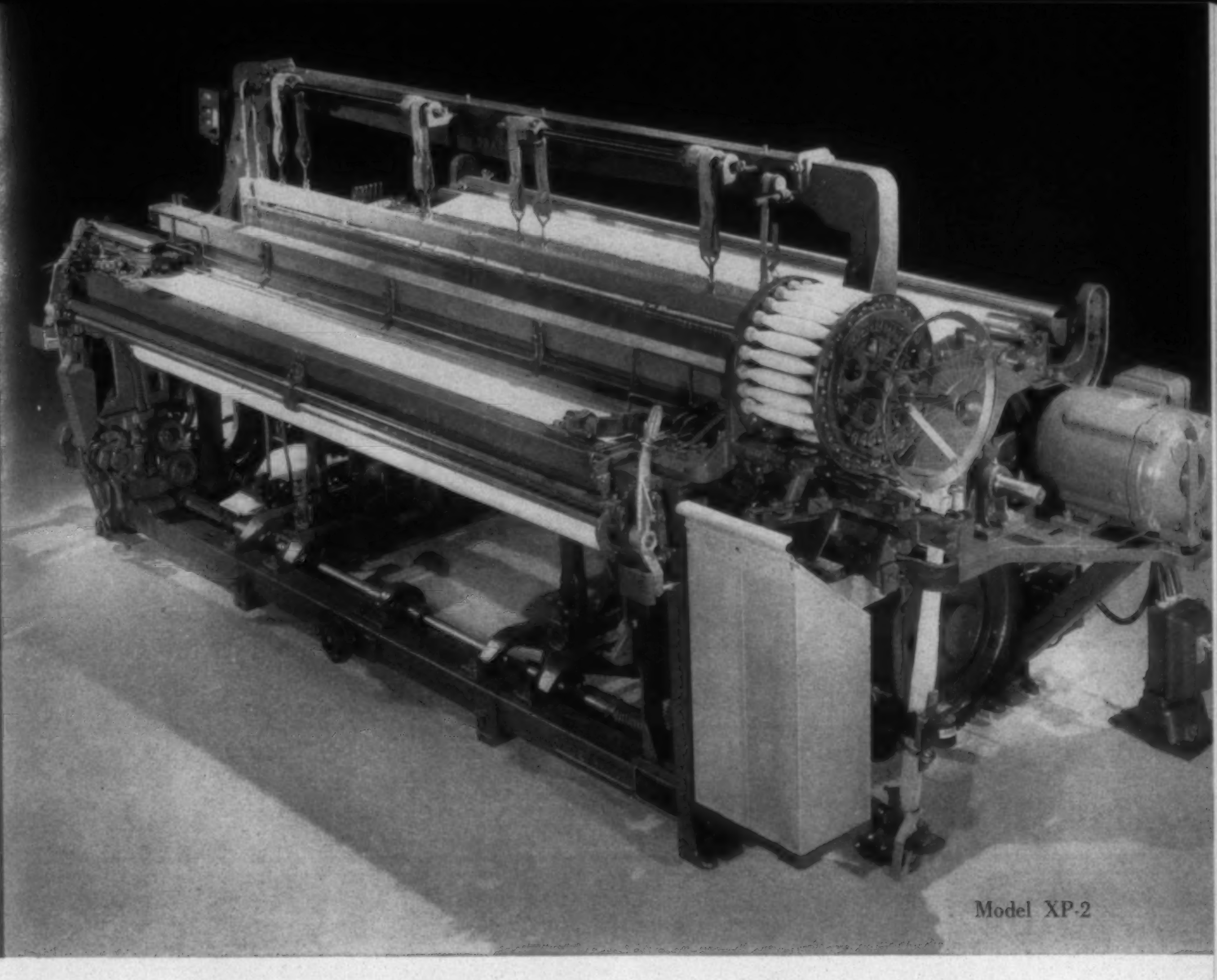
Vary Tally and Large-Figure Hosiery Dozens Counter on Specialty Mfg. Company's "Inspectomatic" Table.

Small Reset Ratchet Counter on Textile Machine Works' full-fashioned hosiery machine.

VEEDER-ROOT

"The Name that Counts"

Hartford, Conn. • Greenville, S. C. • Chicago • New York • Los Angeles
• Montreal • Offices and Agents in Principal Cities



Model XP-2

Increase Wide Sheeting Production . . . with the new XP-2

New constructions found necessary for higher speeds in other models are now available *for the first time* in a wide sheeting loom.

The Draper XP-2 is equipped with a conventional type Pick Motion, simplified Power Transmitter, Bartlett Let-Off, Worm Take-Up, Easy Shipper and Positive Brake.

These adaptations mean increased production, greater loom versatility, less downtime and easier loom operation.

Engineered for high speed and efficient performance the Draper XP-2 *offers better profit margins.*

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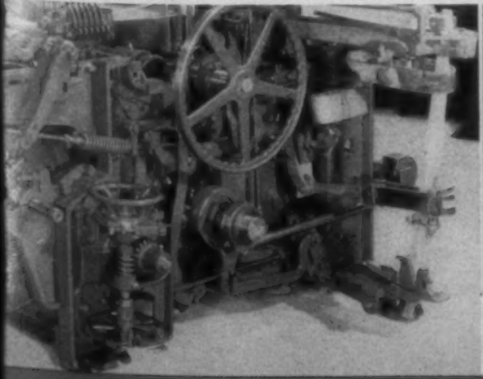
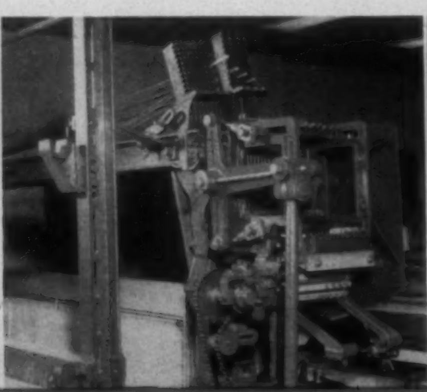
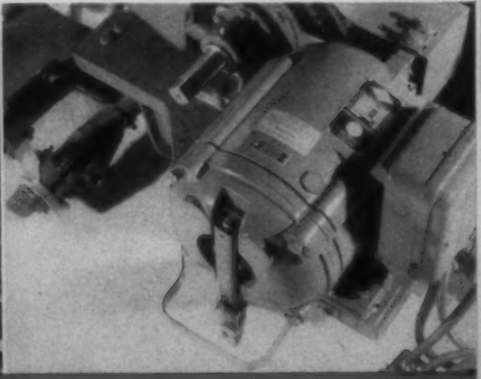
Atlanta, Ga. *Greensboro, N. C.* *Spartanburg, S. C.*



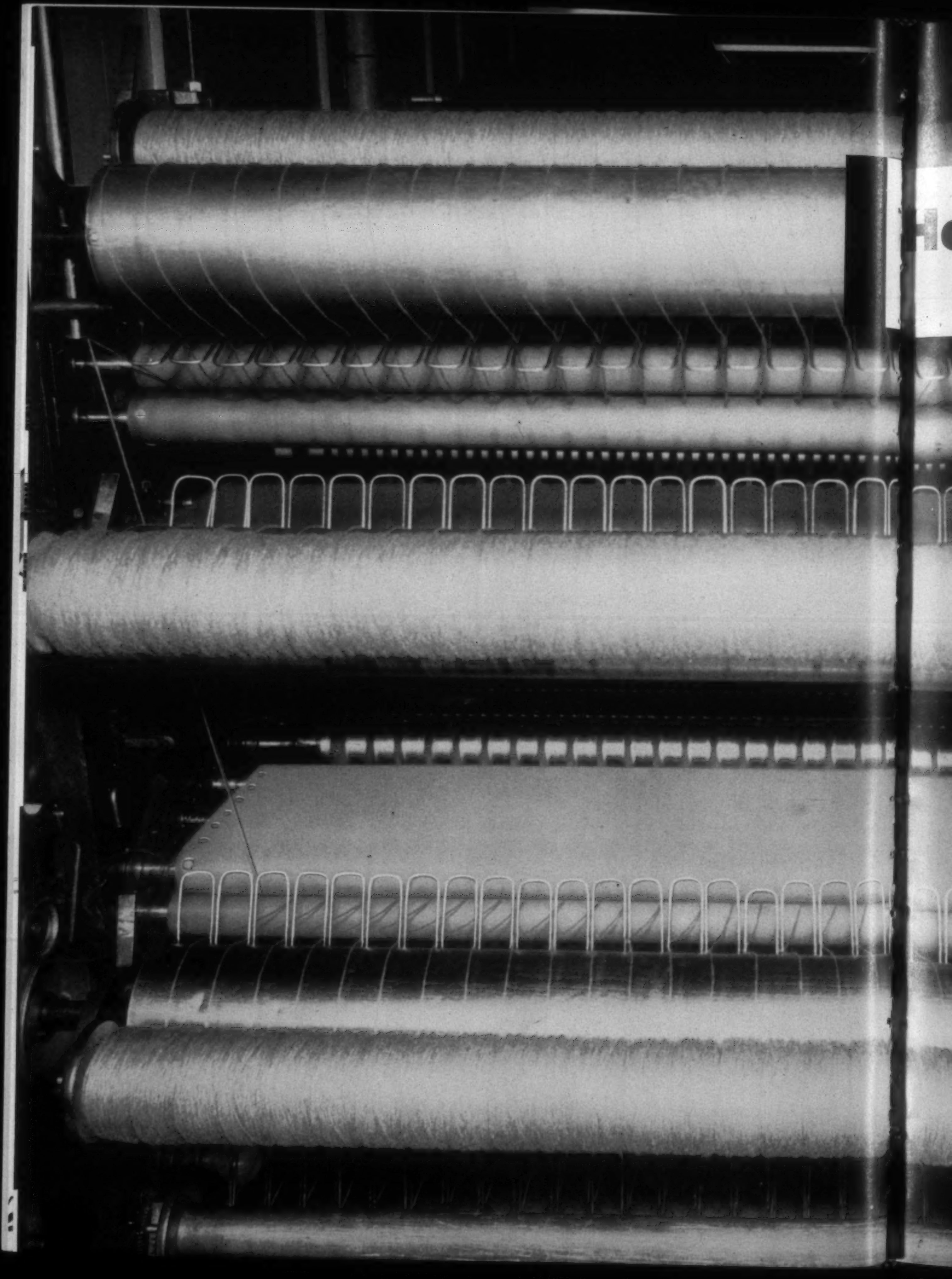
Automatic Bartlett Let-Off



Available with 16 Harness Dobby



Draper-Diehl Drive



ow Dayco Rub Aprons reduce card downtime

. . . improve yarn uniformity

With downtime on a 60" card costing an average of $25 an hour, mills report new Dayco Rub Aprons are saving really substantial amounts every month. They completely eliminate the time formerly lost in oiling ordinary aprons.

Because Dayco Rub Aprons are made of the finest synthetic rubber compounds, they require *absolutely no oiling*. Since most mills oil ordinary aprons every time cards are stripped, this eliminates many hours of card downtime.

Actually Dayco Rub Aprons reduce downtime enough to pay for themselves in just a few months.

Yarn uniformity immediately improves with Dayco Rub Aprons on your cards. Special compounding gives a higher, longer lasting coefficient of friction. New 2-Ply rubber impregnated, reinforced fabric construction reduces eccentric motion as much as 33%. Perfectly concentric, Dayco Rub Aprons hug rolls tightly for constant, even traction. Result: greater control of yarn density for vastly improved quality and uniformity.

Compounded to resist emulsion oils, Dayco Rub Aprons do not "grow," nor are they affected by temperature or humidity. Improved end construction grips buttons tightly. All these add up to long, trouble-free service.

Your Dayco Representative will stop to see you soon. Ask him for the details on all the money-saving features of Dayco Rub Aprons. Or write The Dayton Rubber Co., Textile Div., 401 S. C. National Bank Bldg., Greenville, S. C.

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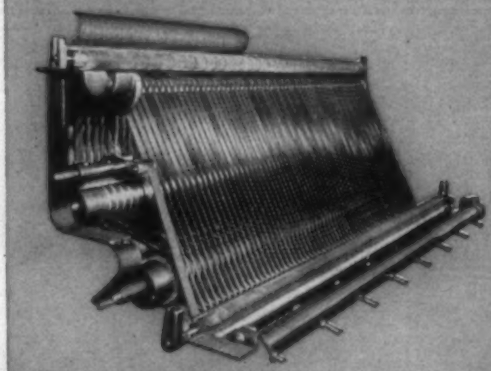


Dayco Endless Condenser Tape

Features offering additional savings . . . greater card efficiency:

- No stretch—little need for take-ups
- Less tendency to twist or turn over
- Easy to clean—require less attention
- Unaffected by oil or static
- Will not crack, economical, efficient

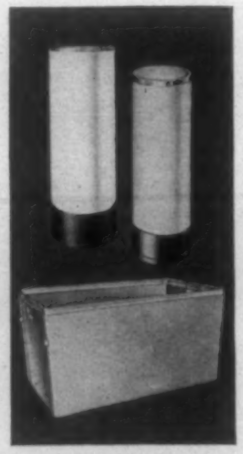
Dayton Rubber

Dayco and Thorobred Textile Products for Better Spinning and Weaving

THE NATIONAL SCENE

MAKESHIFT CONTAINERS RESULTED IN COSTLY DAMAGE at Barringer Knitting Mills, Philadelphia. Orlon sweaters went from mill to dye plant in paperboard cartons, which lasted only a few trips and often broke in transit. Result: pulled threads, smears of dirt, and the extra expense of dry cleaning or classifying items as "irregulars." Carton replacement was costly.

DELICATE FABRICS NOW TRAVEL SAFELY in Kennett "Knitwear Shippers." Barringer eliminated damage to knitted goods in transit when it switched from flimsy containers to strong, smooth, resilient Kennett boxes of National Vulcanized Fibre. These not only protect knitted goods from snags and soilage, but are also light in weight, easy to move and stack, last for years.

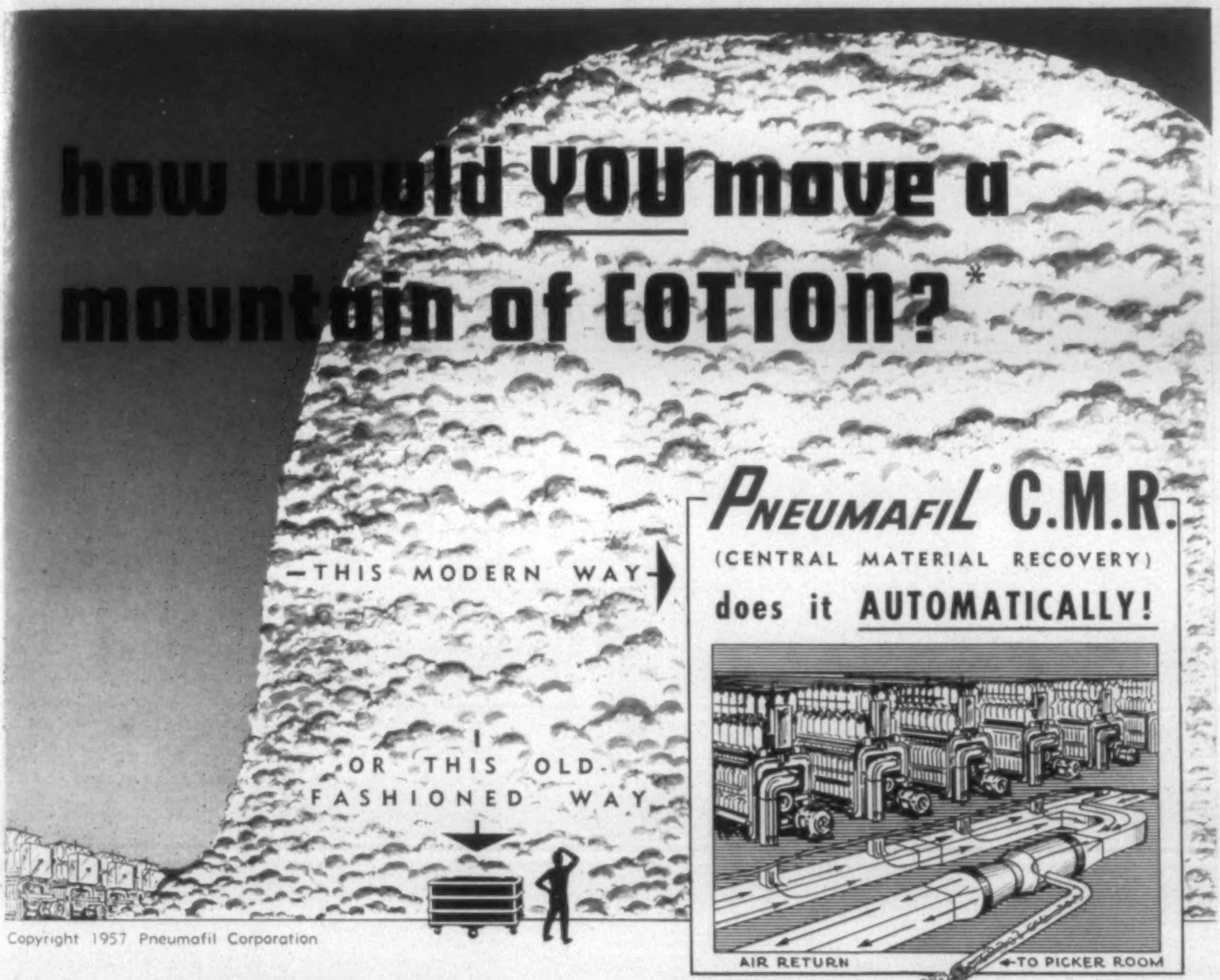


JOB-DESIGNED CONTAINERS FOR EVERY NEED can end your materials handling problems. Kennett Receptacles include Roving Cans, Doffing Trucks, Mill Boxes and Trays.

NATIONAL CAN HELP YOU CUT COSTS TWO WAYS. If your problem is *safety in materials handling*, Kennett Receptacles by National can end it. For National Vulcanized Fibre is bone hard, glossy smooth, resilient and long wearing—won't crack, dent or break—won't rust or corrode. If your problem is *speed and efficiency* in handling, National can solve that too. A National Materials Handling Specialist is always available to help you adapt the broad Kennett Line of containers to your exact need. Simply write for our folder—MATERIALS HANDLING FOR TEXTILE PLANTS, or ask to have him call.

NATIONAL
VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

In Canada:
NATIONAL FIBRE COMPANY OF CANADA, LTD., Toronto 3, Ontario


how would YOU move a mountain of COTTON?*
PNEUMAFIL® C.M.R.
(CENTRAL MATERIAL RECOVERY)
does it AUTOMATICALLY!
—THIS MODERN WAY
OR THIS OLD-FASHIONED WAY
AIR RETURN
TO PICKER ROOM

Copyright 1957 Pneumafil Corporation

FOR SPINNERS ONLY! Pneumafil CMR (Central Material Recovery) means:

AUTOMATION—Fly and ends down fibers are continually and automatically delivered to the picker room (or any desired location) for reintroduction into process.

CMR means no time consuming frame to frame cleaning out of individual collector units and the moving of this material by old-fashioned hand truck methods.

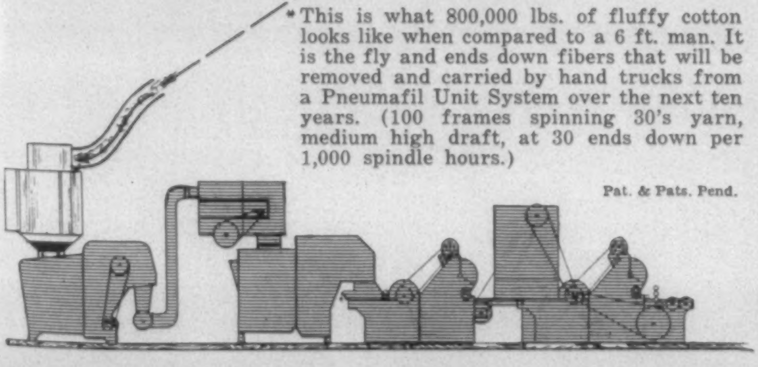
PEAK EFFICIENCY—CMR operates at peak efficiency at all times! A constant air quantity and pressure is maintained at each spindle to assure: (1) maximum frame cleaning; (2) positive pick-up of ends; (3) minimum operating HP; (4) least deviation of temperature and humidity.

Collector units build up air resistance due to material collecting on screens. Because of this you have: (1) changes in air volume at spindle orifices; (2) changes in pressure at spindle orifices; (3) increased operating HP.

CMR is as essential in today's mill as the elevator was twenty years ago. Mills are now converting to CMR. If you have any other system in your mill, you should consider Pneumafil CMR, the best buy in mill modernization.

*This is what 800,000 lbs. of fluffy cotton looks like when compared to a 6 ft. man. It is the fly and ends down fibers that will be removed and carried by hand trucks from a Pneumafil Unit System over the next ten years. (100 frames spinning 30's yarn, medium high draft, at 30 ends down per 1,000 spindle hours.)

Pat. & Pats. Pend.



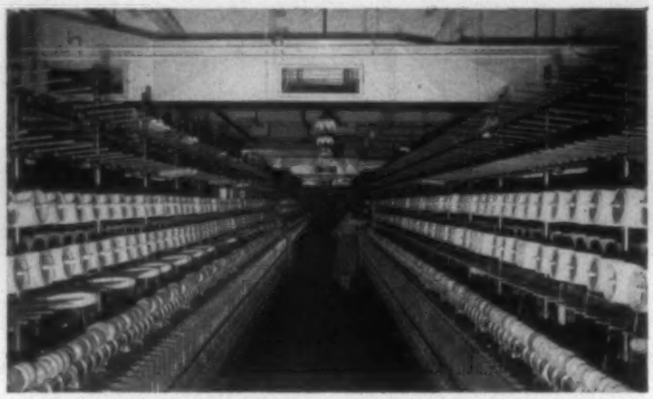
PNEUMAFIL CORPORATION
CHARLOTTE 8, NORTH CAROLINA
Atlanta, Ga., Needham Heights, Mass.

PNEUMAFIL®

Why Owens-Corning Fiberglas chose

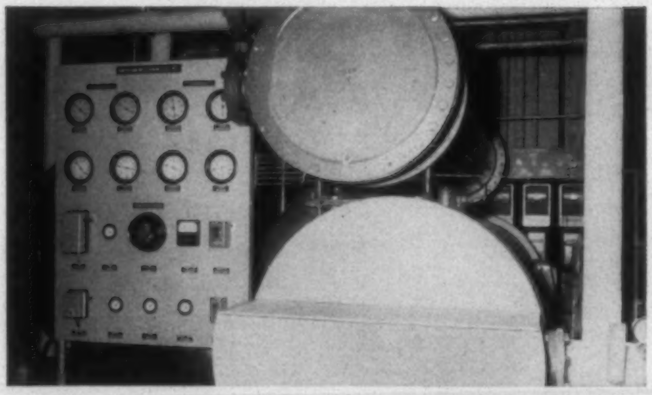
AMCO CENTRAL STATION AIR CONDITIONING

at its Huntingdon, Pa. Plant



Air distribution ducts and zone control atomizers in twisting room at Owens-Corning Fiberglas, Huntingdon, Pa. Widely spaced grille bars and snap-on latches allow quick, easy cleaning and maintenance.

Chilled water reservoir receives excess water from air washers, then recirculates water through chillers as needed.



Refrigeration equipment (chiller at bottom, condenser at top) with indicator and control panel designed and installed by AMCO.

If you want the facts about textile mill air conditioning — central station, unit dry-duct or ductless evaporative cooling — with the advantages and limitations of each system detailed, write for Amco's booklet "Air Conditioning for the Textile Industry". Or better still, ask Amco to recommend the system best suited to your needs. No obligation.

CLOSE-CONTROL HUMIDIFICATION

Owens-Corning, to assure greater operating efficiency throughout its mill, installed an Amco dual (split) system. This system calls for a central station unit augmented by room atomizers which permit the different manufacturing areas to be controlled *independently*, at any point, between 40% and 65% relative humidity.

CLEAN, CONDITIONED AIR

Fresh and recirculated air is thoroughly cleaned and conditioned with the right amount of moisture before distribution by the duct system. Room atomizers raise the moisture content to the level desired for each room, thus assuring ideal conditions for the particular manufacturing process.

CONSTANT YEAR-ROUND TEMPERATURE

Air passed through chilled water spray helps to maintain a year-round 78° F temperature. A total of 550 tons refrigeration capacity keeps work areas independent of outside weather.

ECONOMICAL OPERATION

A washer bypass takes care of below-maximum heat loads, saving on steam costs. This Amco system also uses steam coils to heat air for supplementary warmth when the weather is extremely cold or when machinery loads are very light.

Exterior view of central station apparatus house at Owens-Corning Fiberglas Corp.

AMERICAN MOISTENING COMPANY, Cleveland, N. C. *Branches:* Atlanta • Boston • Camden • Providence • Toronto

CROMPTON & KNOWLES CORPORATION
C&K
WORCESTER MASS·U·S·A·

This Invisible Trademark stands back of the Trademarks of the World's Finest

WOVEN

AUTOMATIC BOX LOOM FABRICS

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MANUFACTURER OF THE WORLD'S LONGEST LINE OF AUTOMATIC BOX LOOMS

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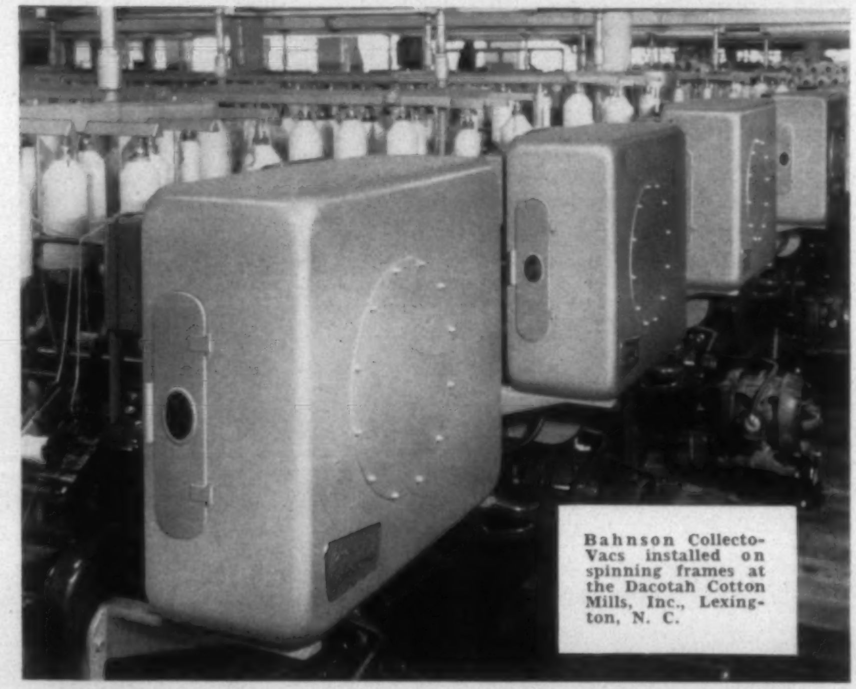
CHARLOTTE, N. C. • PHILADELPHIA, PA. • ALLENTOWN, PA.

Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I. • Crompton & Knowles of Canada Ltd., Montreal, Quebec

new Bahnson Collecto-Vac

FOR COLLECTING LINT AND BROKEN ENDS



Bahnson Collecto-Vacs installed on spinning frames at the Dacotah Cotton Mills, Inc., Lexington, N. C.

Top textile firms find greater performance advantages with the efficient Bahnson Collecto-Vac

A PARTIAL LIST OF USERS

M. LOWENSTEIN & SONS, INC.
GRANITEVILLE MILLS
WALTON COTTON MILLS
NEW BRAUNFELS TEXTILE MILLS
BIBB MANUFACTURING COMPANY
SPRAY COTTON MILLS
J. M. ODELL MANUFACTURING CO.
KENDALL MILLS
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DACOTAH COTTON MILLS, INC.
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BURLINGTON INDUSTRIES, INC.
ERWIN MILLS, INC.
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DAN RIVER MILLS
COWIKEE MILLS, INC.
COMPANIA COLOMBIANA DE TEJIDOS
ABBOTT WORSTED MILLS

Bahnson Collecto-Vac

Mill-proved Collecto-Vac features offer you more for your investment as standard equipment

IN MATERIALS: Attractive anodized aluminum flutes — *no warpage or cracking*. Rugged 14 gauge stamped steel collection box.

IN DESIGN: More uniform suction pressure. Scroll type fan discharge to *disperse* motor alley heat, not *concentrate* it.

Belt driven fan for flexibility, or internal motor for economy. (A scroll type fan is used with both designs.)

IN PERFORMANCE: Greater cleanliness and collection of flying lint. Positive end collection the length of the frame. Lower horsepower at same CFM and suction pressure.

FREE BULLETIN

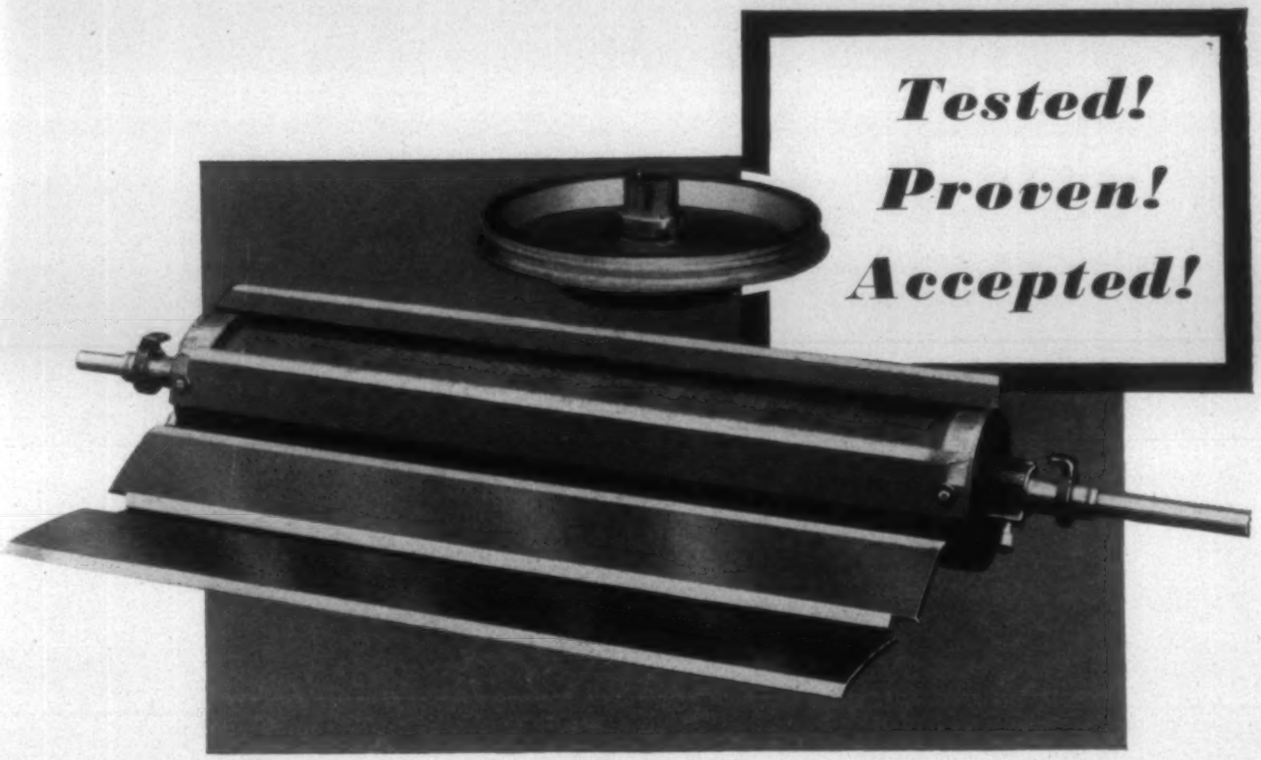
Write us today for our free booklet containing detailed information on the new Bahnson Collecto-Vac.

Bahnson
COMPANY
WINSTON-SALEM, N. C.

AIR CONDITIONING / CLEANING
VACUUM COLLECTION

91 of the top 100

Of the nation's 100 top textile manufacturing firms, 91 are users of Bahnson equipment!



THE GOSSETT IMPROVED CARD FANCY

Eliminates Lumps and Flakes When Carding Synthetics

It is precision built . . . . . machined to your specifications and tolerances by GOSSETT technicians. The extra long spring steel wire fillets are guaranteed to fluff all synthetic fibers from the card cylinders thus enabling the doffer to pick them off evenly. Further, the GOSSETT Card Fancy fluffs the synthetic fibers so well that the doffer will pull off and make as good a sliver as you have ever seen.

When you install the improved GOSSETT Card Fancy there will be no more excess loading on the cylinder. Write at once for full particulars and estimated cost.

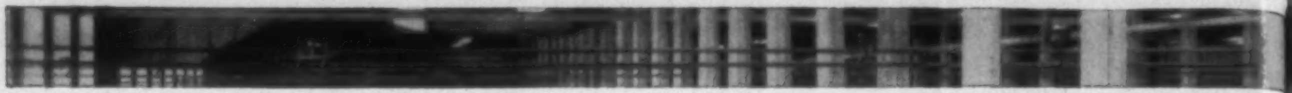
For full information and prices, write

B. W. GOSSETT
President

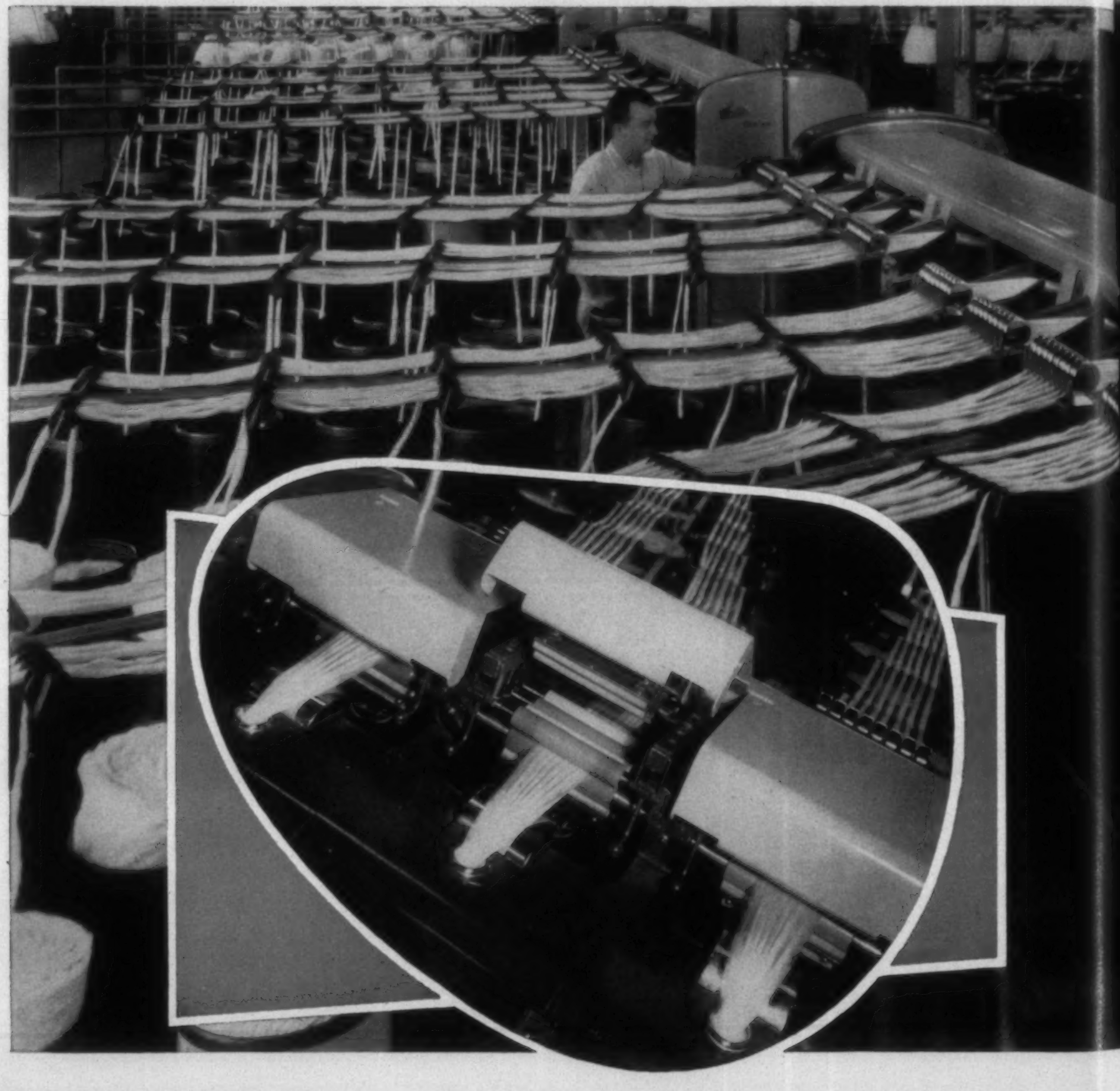
E. C. MASON
Sales Manager

D. W. SMITH
N. C.-Va. Representative

GOSSETT Machine Works, Inc.
GASTONIA, NORTH CAROLINA



From a practical viewpoint...WHITIN



The Whitin EVEN-DRAFT* drawing frame with its unique Pneuma-Clear waste removal unit has been installed and sucessfully operating in scores of mills. It has now been proven the first practical high speed drawing frame, outperforming all others. Users report up to triple production, sliver more even than ever produced before, costs reduced up to 50%, plus many other advantages in subsequent processing, in yarn and fabric quality.

EVEN-DRAFT* DRAWING

is your best buy . . .

Because

It is unequalled for production, evenness of sliver, running cleanliness, efficiency and lowest operating cost.

Unretouched photo of 80 delivery installation of Whitin EVEN-DRAFT drawing frames. Note extreme cleanliness of machines and area.

You get **ALL** these advantages with Whitin **EVEN-DRAFT DRAWING**

- **Runs up to 300 feet per minute — On all fibers up to 3" — depending upon mill conditions and production needs**
- **Cleanliness — Clearer waste and fly efficiently removed by Pneuma-Clear units on each delivery — an indispensable essential to satisfactory operation — available only on WHITIN EVEN-DRAFT.**
- **Four over Five drafting units — no rolls to remove or replace, simple to set**
- **Superb sliver quality — Variations: carded 12-16%; combed, 10-14%; synthetics, 10-14%**
- **Advanced design — Two independent four-delivery heads, heavy vibration proof precision construction, overarm weighting, electronic stop motions and signal lights; 14" - 15" - 16" cans, 36" or 42" high.**

A specific example, based on actual operating conditions in the production of high quality print cloth 80 x 80, 39", 4.00 yds./lb., 31's warp, 41's filling, 162,190 lbs. per 144 hrs.

	Breaker	Finisher
No. deliveries	32	32
Sliver fed., grs.	55	55
No. slivers	6	6
Sliver del., grs.	55	60
F.P.M.	300	300
Efficiency	80%	80%
Prod./lbs./hr.	302	329
Prod./144/hrs.	43488	47376
Operators	1	1

Direct labor cost per lb. for drawing (based on cloth prod.) .... $.00234

TRADE MARK*

Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • GREENSBORO, N. C. • ATLANTA, GA. • SPARTANBURG, S. C. • DEXTER, ME.

First Choice

for new permanent finishes

Penford Finishing Gums*

FOR

COTTON DENIMS,

CHAMBRAYS,

GINGHAMS,

ETC.

These highly substituted starch ethers are very reactive with the latest thermosetting resins used to obtain permanent starch-resin textile finishes.

Penford Finishing Gums cross linked with resins impart a permanent hand durable to repeated laundering—and dimensionally stabilize fabrics. This new finish provides improved crease recovery characteristics, increases abrasion resistance, and reduces the loss of tensile strength usually accompanying resin applications.

Our Technical Sales Service Engineers are available for consultation on finishing problems to recommend the specific Penford Finishing Gum formulation to best fill your requirements. Literature available upon request.

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*U.S. Pat. Nos. 2,516,632
2,516,633; 2,516,634

Manufacturer of Douglas Pearl STARCH — Douglas Crown Thin Boiling STARCHES — Douglas Oxidized STARCHES — Clearsol Gums — and Douglas Dextrines for the Textile Industry.

END DRIP SPOILAGE!

Protect your yarn and roll coverings from needless spoilage... switch to Sinclair NO-DRIP lubrication! These outstanding lubricants give complete bearing protection, yet stay put. They won't creep or throw out of bearings—remain fluid—permit rolls to turn easily and smoothly.

Sinclair NO-DRIP Numbers 8, 12, 15 and 17 can save you money through smooth operation and low maintenance costs. Call your Sinclair Representative today, or write for the new NO-DRIP pamphlet to Sinclair Refining Company, Technical Service Division, 600 Fifth Avenue, New York 20, N. Y. *There's no obligation.*

SINCLAIR

NO-DRIP TEXTILE LUBRICANTS

New quality standards for man-made fibers set by Acrilan

Current production, controlled by the most exacting specifications in the industry, is yielding Grade A Fiber of unexcelled uniformity.

The reports have been coming in for almost two years now . . . mill after mill citing Acrilan as the smoothest-running, most efficient fiber in their plants today.

The story behind these reports is a most significant one for mill operators. For today's delivered production marks a tremendous advance in the performance of Acrilan . . . and this performance, in turn, is setting new standards formerly deemed unattainable by the newer man-made fibers.

The story starts with a basic concept of exactly what Quality Control is—and is not.

It is *not*, in our terms, just a matter of spot sample checking and finished product inspection.

It *is* by our definition, a system of the strictest specifications, tolerances and checks for controlling every single step in the manufacturing process of Acrilan acrylic fiber. In fact, the control limits now set for our production standards are *many times more severe* than those generally considered feasible in the fiber industry.

This concept of Quality Control has already proven itself at Chemstrand's Pensacola plant where new standards for nylon production have been set.

ACRILAN
ACRYLIC FIBER BY
CHEMSTRAND

Here's what it can mean to you in Acrilan acrylic fiber:

STAPLE LENGTH UNIFORMITY we believe to be unexcelled. The use of newly-developed electronic controls and round-the-clock cutter inspection has achieved this.

SHARP REDUCTION OF PLY
in hibulk and heavy denier fibers . . . effected through improved processes. This reduction has significantly raised yarn quality and lowered mill cleaning costs and waste.

FAR BETTER FINISH CONTROL
. . . with the direct, resultant effect of improving carding and spinning uniformity, mill efficiency and product quality.

UNIFORM DYEABILITY
In the last 2 years there has been no change in dye merge numbers . . . a record few fibers can boast.

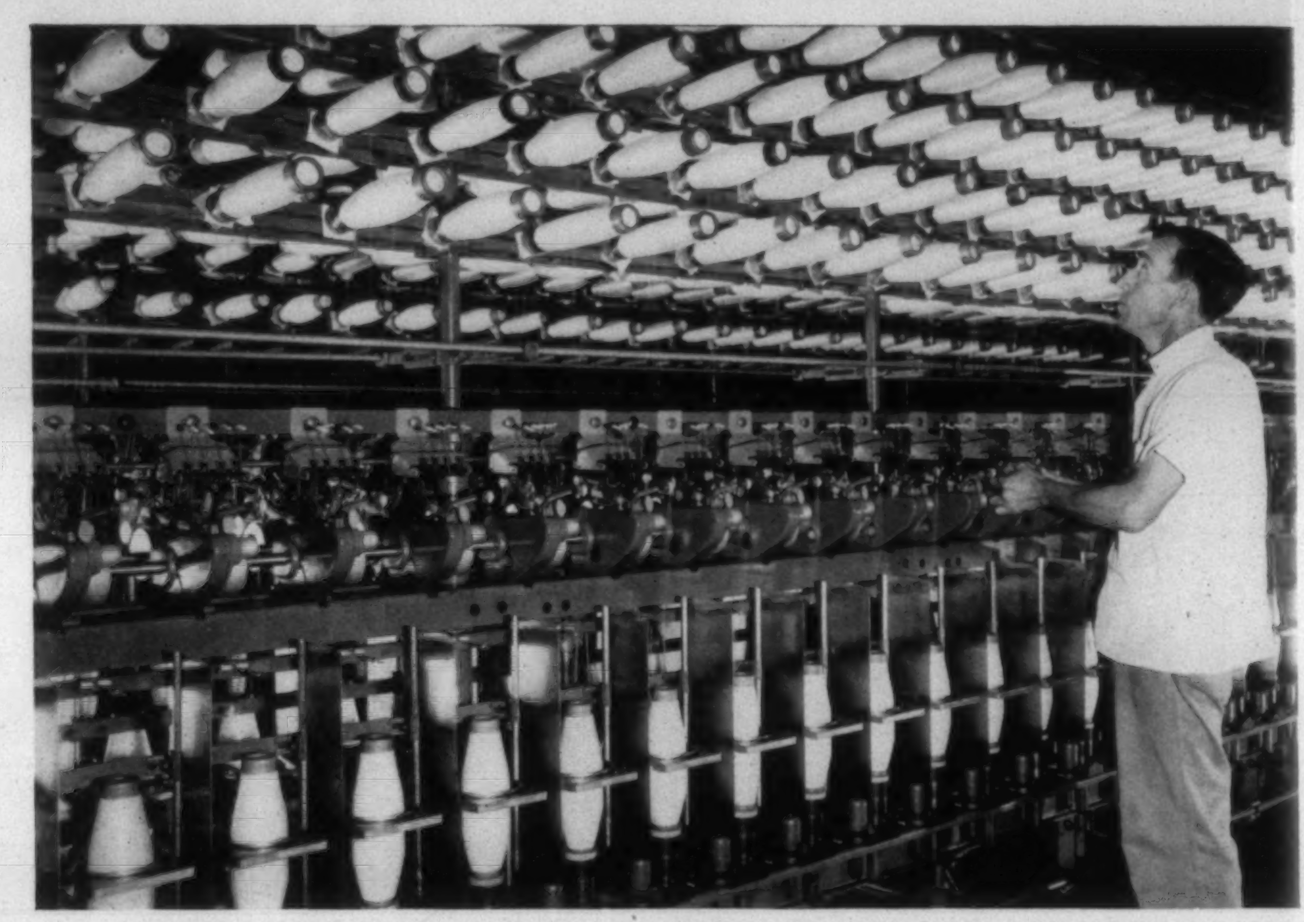
We cite these as typical advances made by quality control in the uniformity and performance of Acrilan. The full list is far longer.

Its aggregate effect has been to raise and maintain the current, daily yield of top-grade Acrilan fiber at a uniform level surpassing all previous standards for the industry.

To you, concerned with mill operation, this obviously means new increases in production efficiency, new reductions in production imperfections and, consequently, new highs in yarn quality.

And far from being the end of the story . . . we see this as the beginning. Each new advance in Acrilan fiber quality, each new gain in uniformity furnishes Quality Control with a still better standard for still further improvement!

THE **CHEMSTRAND** CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVE., NEW YORK 1, N. Y. • DISTRICT SALES OFFICES: 3½ Overwood Road, Akron, Ohio; 4 Pearl Street, Dedham, Mass.; 222 South Church Street, Charlotte, N. C. • PLANTS: ACRILAN® ACRYLIC FIBER—Decatur, Ala.; CHEMSTRAND® NYLON—Pensacola, Fla.



Leesona Model 10 Ring Twisters processing glass yarn at the Seguin, Texas, plant of the Coast Manufacturing and Supply Company. The firm produces Trevarno Glass Fabrics.

Producers of TREVARNO GLASS FABRICS chose Leesona Model 10 Ring Twisters

Years of research and planning went into the decision of Coast Manufacturing and Supply Company to enter the textile industry as processors and weavers of glass cloth. The 85-year-old Livermore, California, firm, with a long history in the manufacturing and distribution of safety fuse for the mining and construction industries, made the carefully-planned move into textiles in 1947.

Ralph E. Merritt, president of the firm, reports:

"After evaluating other types of twisting equipment, Coast Manufacturing and Supply Company decided upon the Leesona Model 10 Ring Twister."

Model 10's are used exclusively in Coast Manufacturing's 800-spindle twister installation in Seguin, Texas, producing a double-tapered package which can be used directly for filling and warping operations without rewinding.

Versatile Leesona Model 10's can also produce a tapered top or straight wind package. They are ideal for processing not only glass yarn, but rayon, spun rayon, nylon, silk, wool, worsted, cotton and combination yarns, and the new bulk and stretch yarns as well.

Make Your Own Evaluation

See how flexible Leesona Model 10 Ring Twisters can improve your own twisting operations. See your Universal representative or write direct.

23.6.1

UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

LEESONA ®

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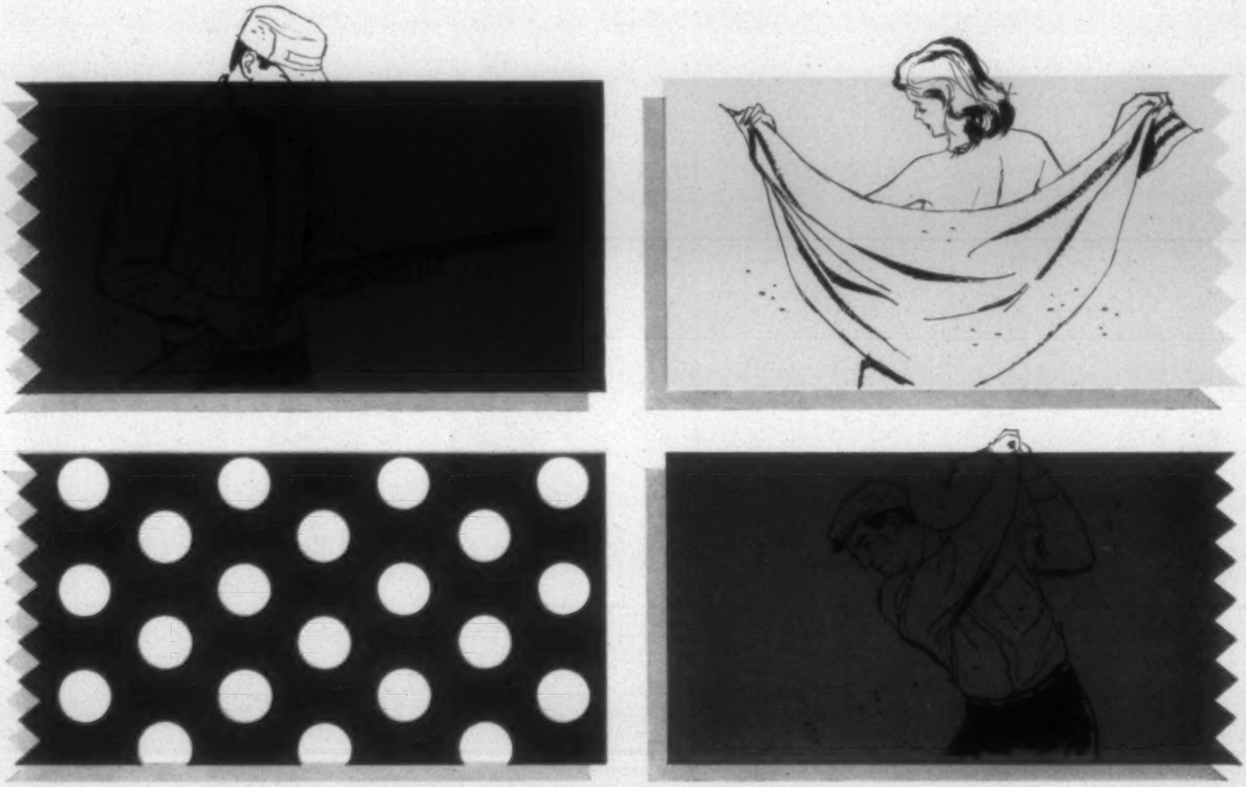
Winding and Twisting Machinery for Natural and Synthetic Yarns

use NAPHTHOL DYES by gdc



for deep, brilliant shades—all around color-fastness—high productivity at low cost

Bright reds and yellows, deep rich navies, browns, wines and blacks either too difficult or expensive to achieve with other dyes are simply and inexpensively produced with GDC Naphthols in cotton and rayon, in pad, jig or continuous systems. Acetate, Dacron* and nylon may be dyed by special processes.

Naphthol colors are fast to washing, light, chlorine, alkali and cross-dyeing. Many Naphthols are used as ground colors for discharge printing where wash- and light-fastness are required.

A complete range of highly soluble Naphthol Powders are available. However, for greater economy in high-speed, large-volume operations the prepared liquid Naphtholate AS Solution brands are generally preferred.

The Fast Color Salts and Bases used for development are reliably uniform from batch to batch and most are nondusting for cleaner handling.

Our Technical Service Laboratories are ready to advise you on how to utilize Naphthol dyes in your particular operation.

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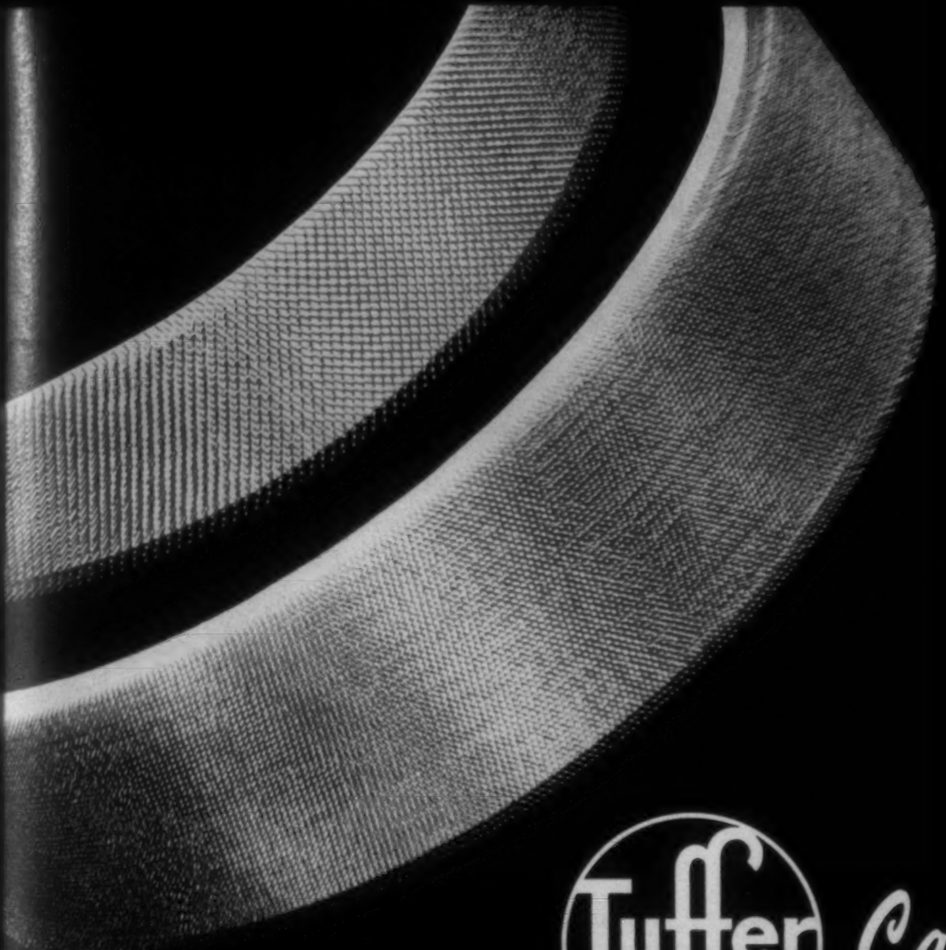

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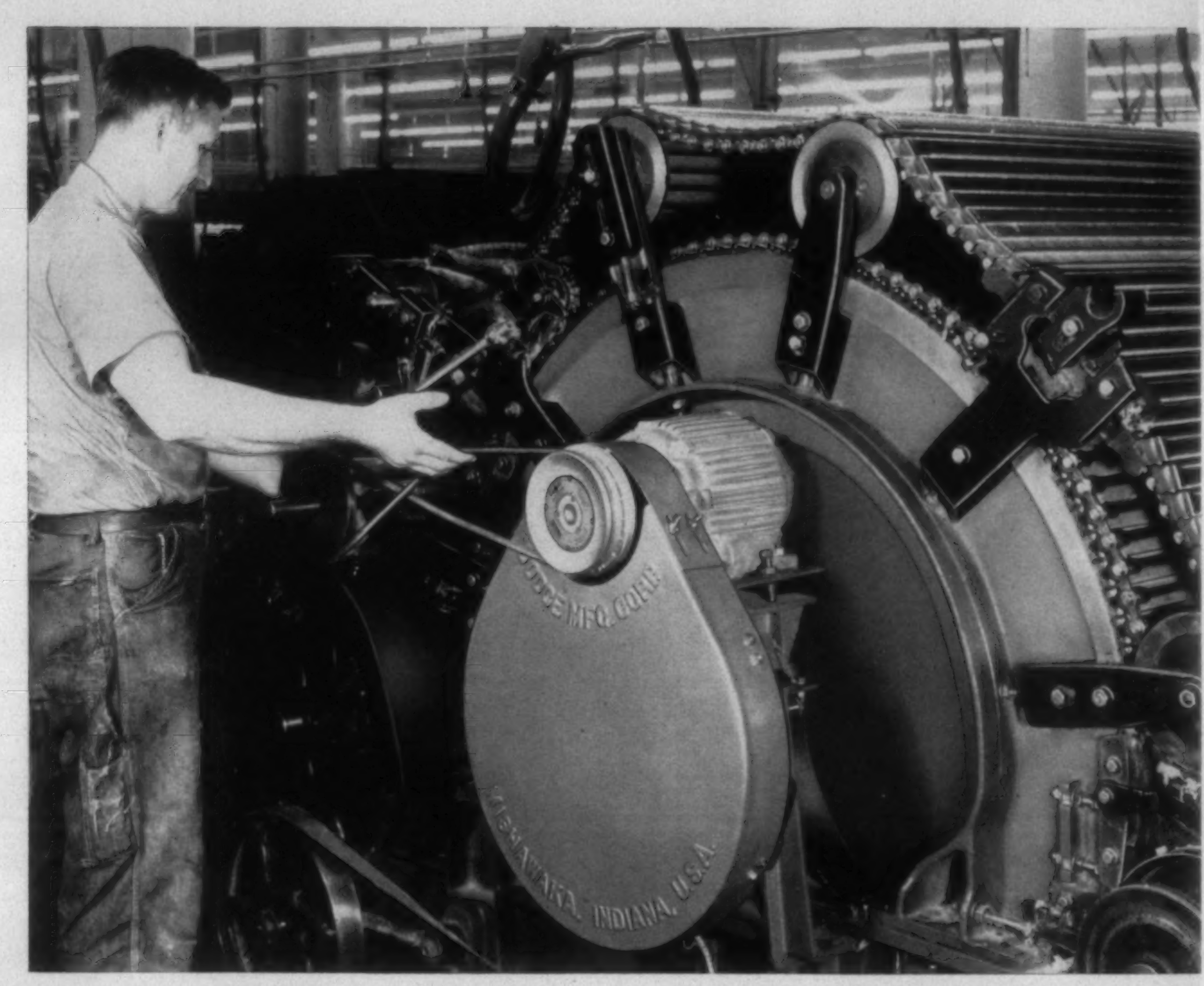

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Flexidyne, heart of this new complete Card Drive by Dodge, picks up the load smoothly... protects machinery and motor against shock and overload . . . delivers 100% efficiency during running cycle. Flexidyne, *the Dry Fluid Drive,* eliminates need for high torque motors and expensive controls, saves power, provides a new and better way to drive textile machines.

Note the special aluminum pulley mounted on Flexidyne housing, enabling quick, convenient operation of stripper. Pedestal has adjustable motor base to control tension on V-belts. You should have the full story of all the advantages of the new Dodge Flexidyne Card Drive. Ask your local Dodge Distributor, or write us, for new illustrated Bulletin A-653.

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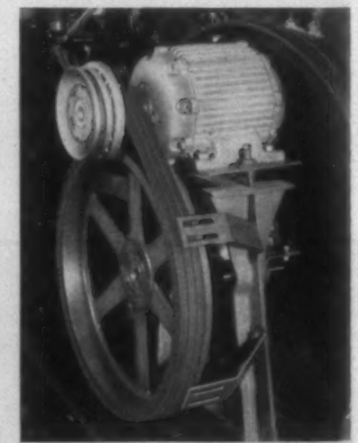

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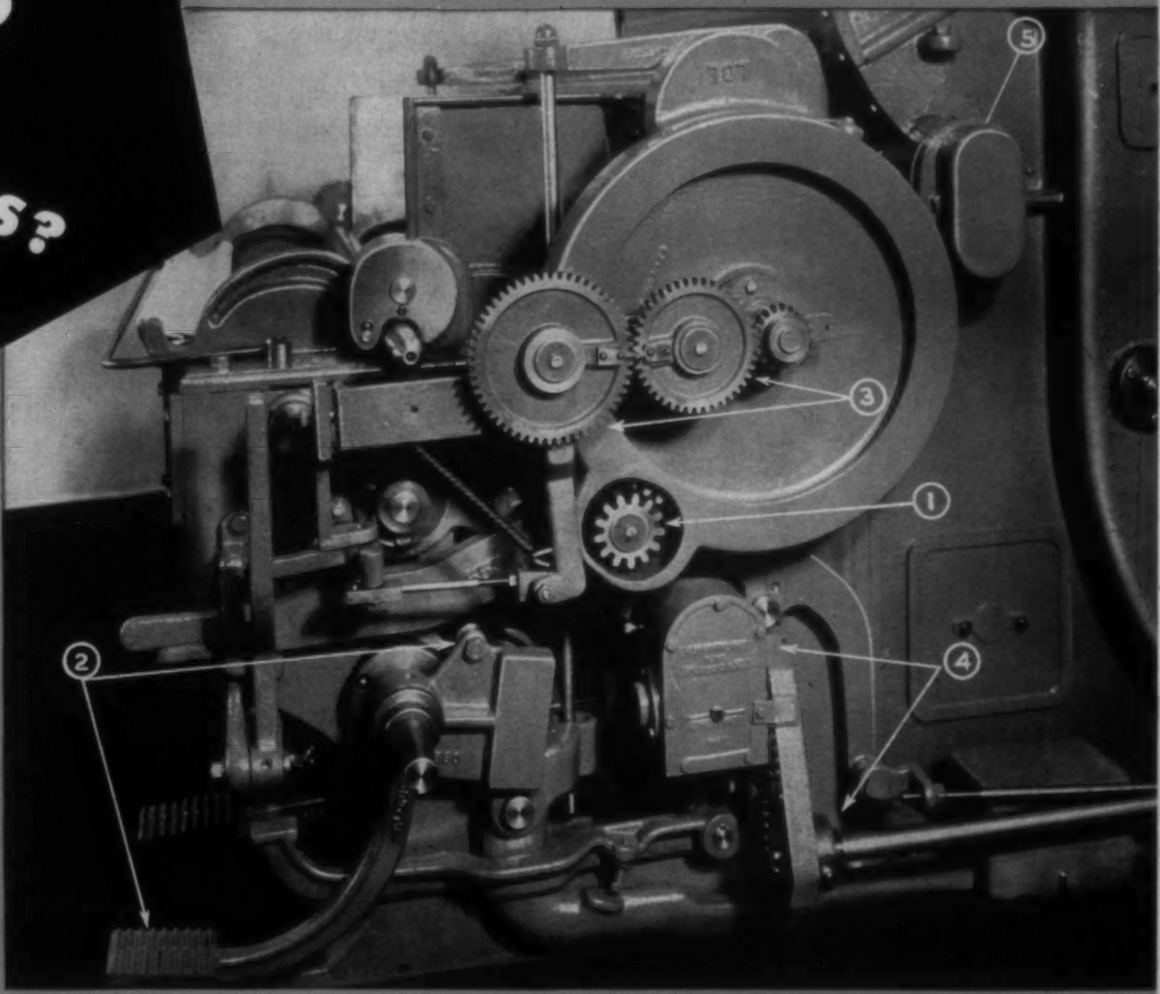

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You get good fibre lay and a tough, smooth size film with . . .

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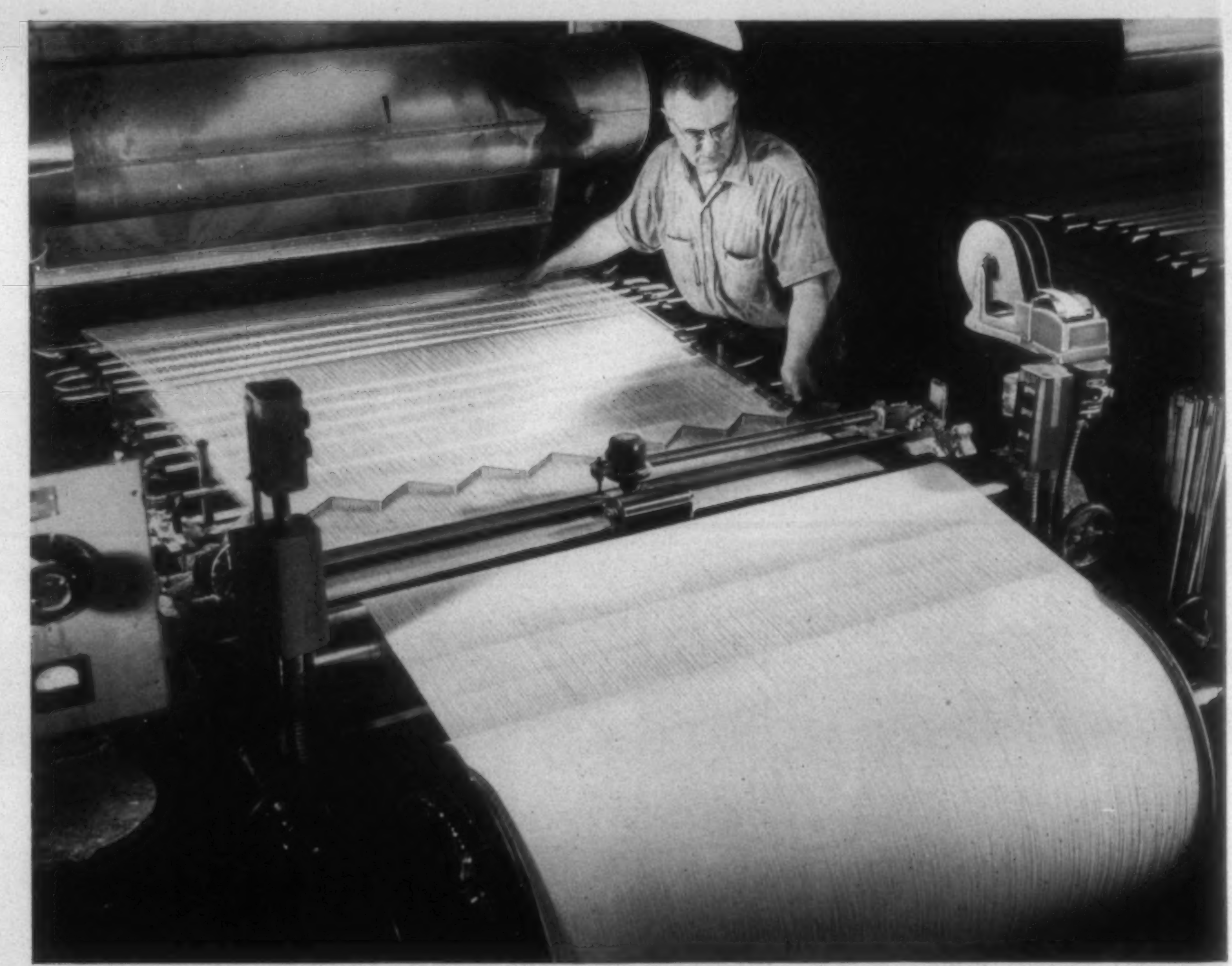

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Ask the man from Corn Products. Ready to assist you in any way, he has at his disposal the most complete laboratory and technical facilities in the industry. The man from Corn Products can also provide engineering service for the installation of bulk-handling equipment. Write or phone for information, there is no obligation.

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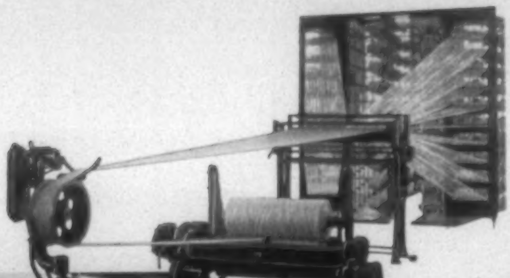

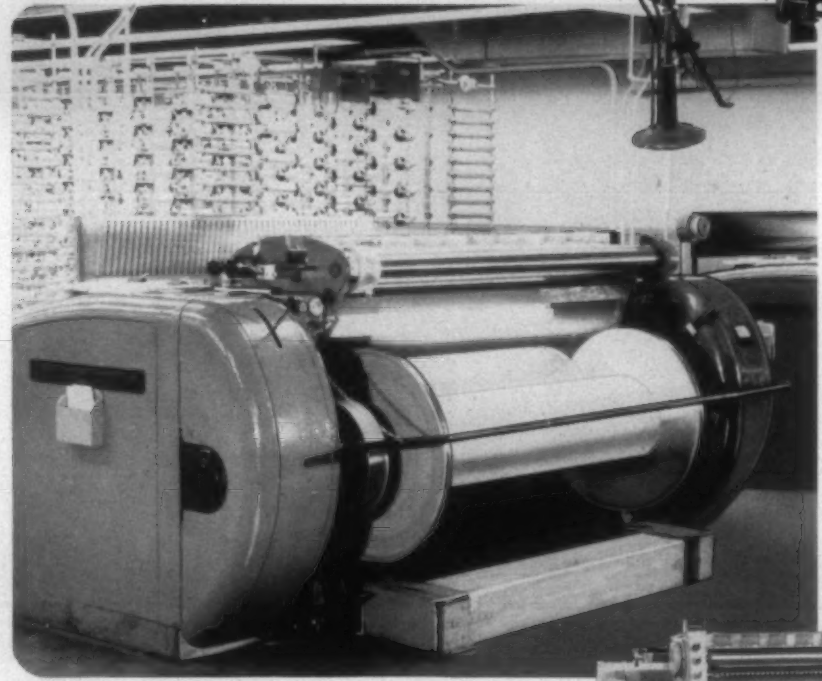

680 Since 1950

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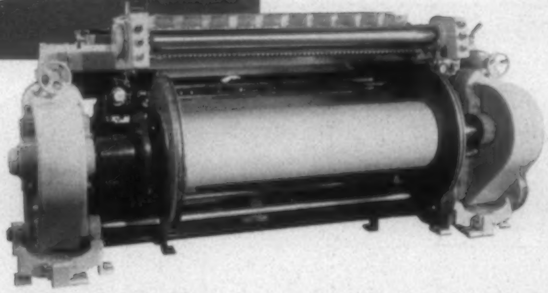
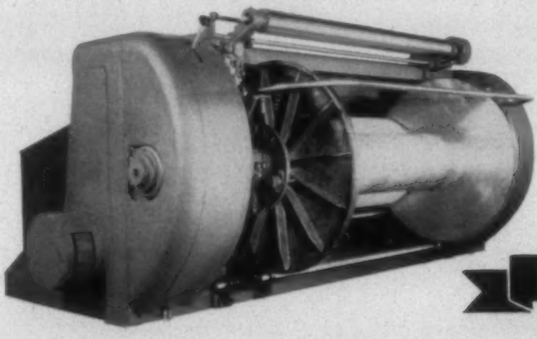


. . . has installed over 680 warpers since 1950—approximately three times the volume of the next leading make. Speed, flexibility, economy, and many valuable exclusive features account for this outstanding popularity—from finest deniers to heaviest tire cord yarns.

Accurately maintained air operated pressure produces beams of any desired density, from hardest beams for extra hours of weaving to soft beams for perfect dye penetration. Speed and braking are rheostat controlled from both ends to provide smooth operation and instant stops at all speeds. Horizontal traverse on combs prevent channeling. Other features, such as air doffing, predetermining counter clocks, and electric speed indicators are standard on most models. Heavy construction practically eliminates vibration.

Whatever your warping requirements may be, there is a Cocker Machine which will do the job faster and better. Let us give you full information on the type you need.



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COCKER Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE
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For rug dyeing headaches – the proved cure is

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RUG DYE KETTLE

This cost-cutting equipment has been thoroughly proved in several years of service. It enables you to do even, level, quick dyeing — side-to-side and end-to-end — of heavy materials in open width . . . cotton or any synthetics, whatever the demand may be . . . richer, thicker goods as required . . . eliminating the high cost of seconds due to uneven dyeing. You can —

Dye many varieties of weaves, keep up with the constantly changing demand for dyeing various synthetics and blends.

Double or triple the speed of your operation on many rug types by *simultaneous multiple dyeing* of different widths — with special guiders enabling you to run through various widths of rug fabric at the same time.

Write for bulletin giving all features of R & L Stainless Steel Rug Dye Kettle. We advise on all dyeing equipment problems.

R & L Rug Dye Kettle proved in service in many plants

ADVANTAGES

- Dyes open widths or rope
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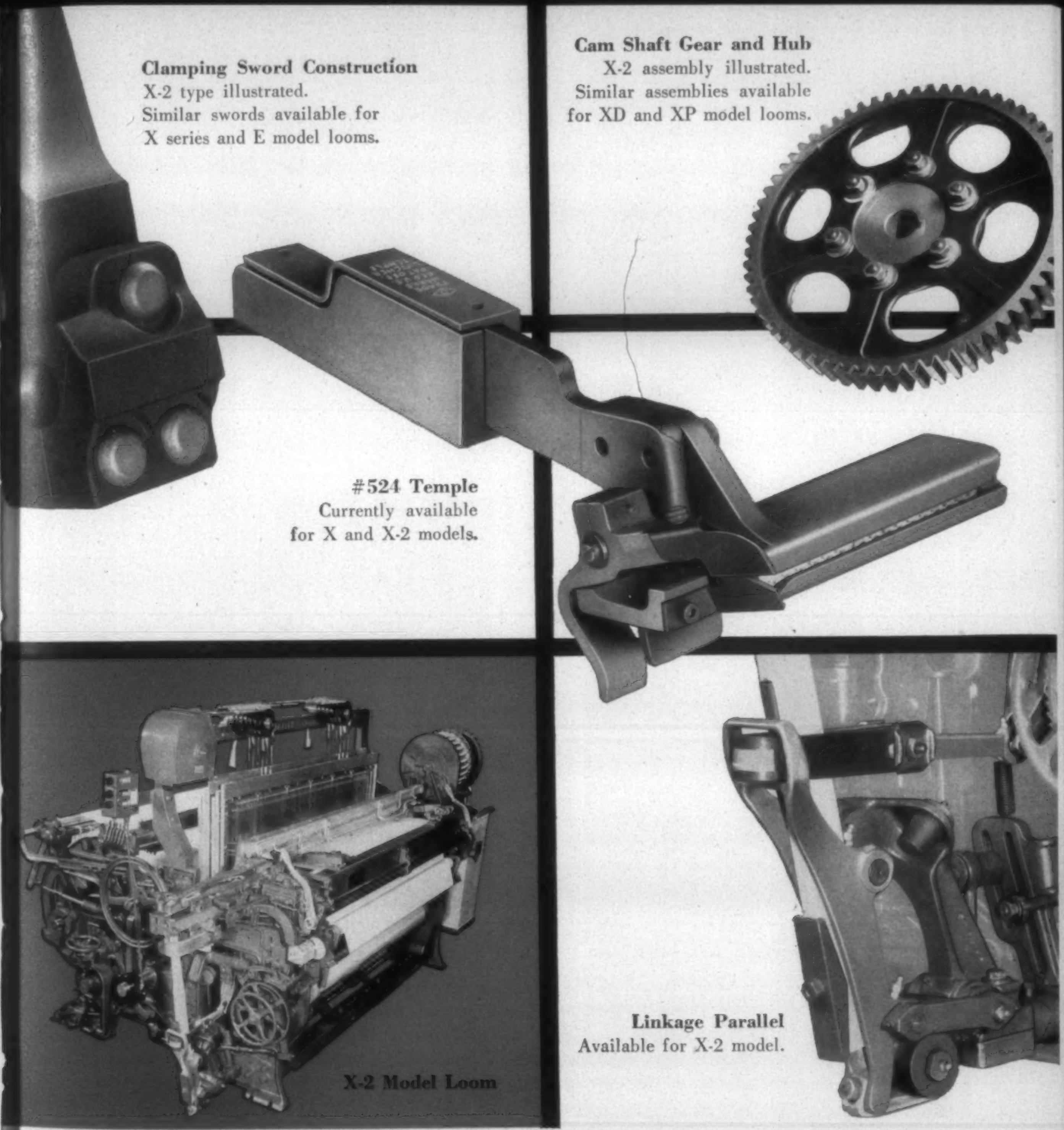

Clamping Sword Construction
X-2 type illustrated.
Similar swords available for
X series and E model looms.

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X-2 assembly illustrated.
Similar assemblies available
for XD and XP model looms.

#524 Temple
Currently available
for X and X-2 models.

X-2 Model Loom

Linkage Parallel
Available for X-2 model.

Next to new looms . . .

Looms equipped with the latest mechanisms and improved repair parts, *designed and built by the original manufacturer*, will meet today's rugged performance requirements.

Draper improved repair parts and mechanisms — some of which are illustrated above — are designed to increase loom production, efficiency, and flexibility.

Lower maintenance costs and ease of application are additional benefits derived from the use of Draper repair parts and mechanisms.

Equipped with Draper improved repair parts and assemblies, your existing looms will be second only to *new Draper looms.*

DRAPER CORPORATION

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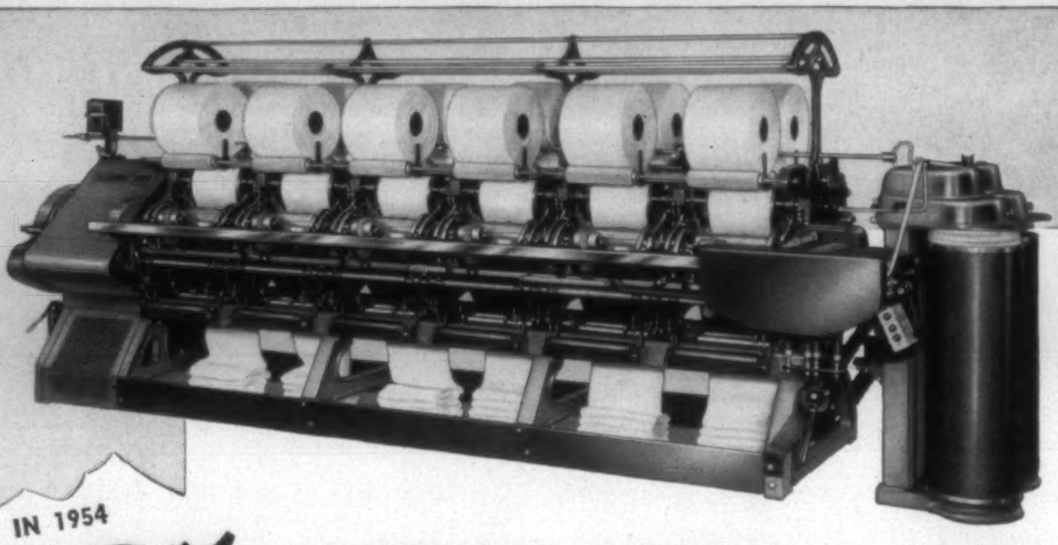

IN 1954

78% of all the combed yarn produced in the U.S. was processed on SACO-LOWELL COMBERS

TOTAL U.S. PRODUCTION
553,522,000 LBS.

PURCHASERS OF SACO-LOWELL MODEL 56 COMBERS IN 1956

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Dover Mills Co.
Drayton Mills
Glendale Spinning Mills, Ltd.
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Greenwood Mills
Institute of Tex. Tech.
Marion Mfg. Co.
Morgan Cotton Mills, Inc.
New Braunfels Textile Mills
Oakboro Cotton Mills
Orr Mills
Parkdale Mills
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Plus 27 Mills in foreign countries

QUALITY SEEKING MILLS HAVE SELECTED SACO-LOWELL COMBERS FOR THESE AND MANY OTHER GOOD REASONS—

1. Superior quality and evenness of sliver.
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More than 380 Saco-Lowell Model 56 Combers were purchased in 1956 . . . by mills here and abroad.

With Saco-Lowell Model 56 Combers, your mill can profit from production as high as 55 lbs. per hour with $1\frac{3}{16}''$ American Cotton, with a detaching efficiency 2% better than any other comber.

Contact your nearest Saco-Lowell sales office for complete details or arrangements for a demonstration.

*Source of data
U. S. Department of Commerce
1954 Census of Manufactures June 1956

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Shops at BIDDEFORD and SACO, MAINE, and SANFORD, N.C.; Sales Offices: CHARLOTTE · GREENSBORO · GREENVILLE · ATLANTA

When the AVISCO INTEGRITY TAG says washable your rayon shirts sell and stay sold!

A quality fabric containing Avisco fibers
AVISCO®
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WASHABLE

Many people don't realize what tremendous advances rayon fibers and rayon finishes have made in the past year or two.

The Avisco Integrity Program has been set up to consolidate these gains, explain them and build continuing public confidence in them.

Washable rayon shirts, for instance, offer a tremendous new volume potential for the retailer. For now the true colors, the lasting luster and the luxury look of fine rayon can be sold as "washable" without a qualm. Even white rayon business shirts offer important new sales advantages.

You can have confidence in shirts bearing the "washable" Avisco Integrity Tag because every qualified fabric has passed these eight tests:

1. Colorfast to machine laundering in HOT water (160° F)
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7. Breaking strength (A.S.A. test L-22)
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For further details, call LA 4-7200 or write
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are champions in the textile industry!

. . . because they are *scientifically* conditioned to run smoother and faster with less wear on expensive rings. The trainer—a modern metallurgical laboratory where highly trained technicians guard the *QUALITY* and speed the *SERVICE* which have made CARTER TRAVELERS "champions" in the field.

Division of **A. B. CARTER, INC., GASTONIA, N.C.**
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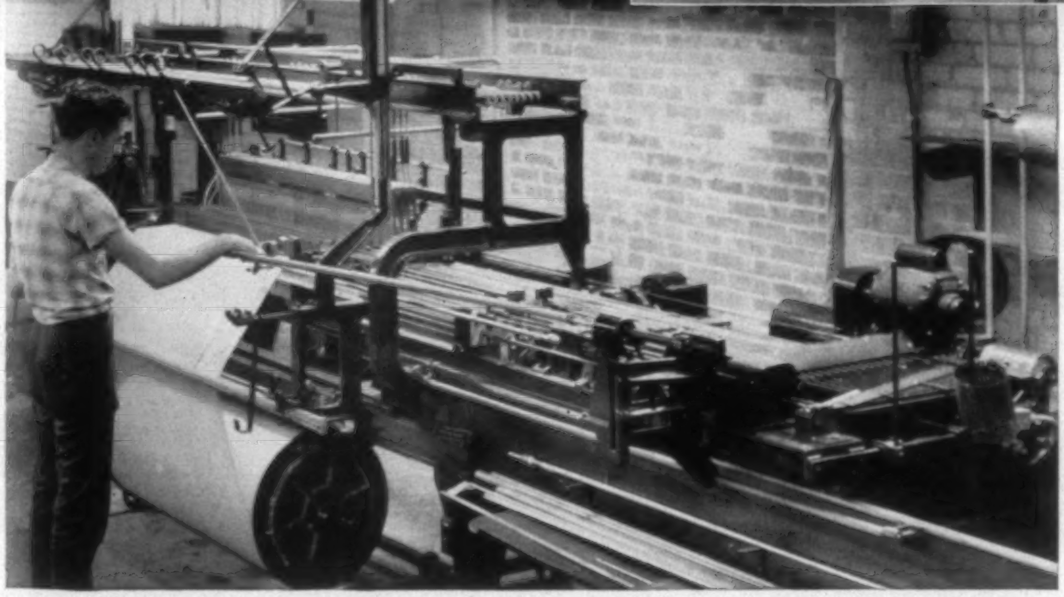
ENTERING

YOUR **WARPS**

LIKE THIS



WE SUGGEST YOU LOOK INTO THE

BARBER-COLMAN WARP DRAWING MACHINE

With this machine, the time-eating task of drawing-in is speeded up tremendously. A power-driven needle, running at 127 to 230 strokes per minute (depending on the number of weaving elements to be entered), draws each thread in succession through the correct selection of drop wire, heddle, and reed dent. This correct selection is made accurately *and automatically* for each pick by a sequence of mechanical actions controlled by a pattern strip punched in accordance with the designer's draft. Very substantial reductions of drawing-in costs are possible, particularly on patterned goods such as stripes, plaids, and fancy weaves. This *modern method* of replacing warps has enabled many mills, both large and small, to meet the ever-increasing demands for a greater variety of patterns. *Your Barber-Colman representative is qualified to advise you on possibilities in your mill.*

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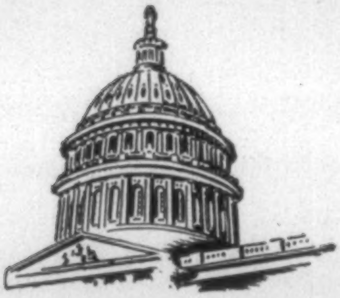


WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Prime objective of Senator McClellan's Senate Select Committee is to determine whether union welfare and pension funds have become giant grab bags for corrupt leaders. Growth in these funds has outdistanced any burgeoning stock market or expansion in industry. They thrived on a "tight labor market" after the war, with a half dozen wage increase rounds, and the introduction of fringe benefits. In their mushroom growth there has never been protective legislation to assure security. Only a small part of "covered workers" today can put their fingers on sure benefits when they reach retirement age.

The evidence is growing that welfare funds are something into which union bosses dip with a free hand for their own spending and costly junkets. More security exists for permanent care funds of cemeteries than is found for the average pension fund in the possession of top union leaders. The funds are growing at the rate of over $4 billion a year, and the estimate is that the aggregate now is in excess of $30 billion. Racketeers and gangsters have been swift to move in, with kick-backs and shake-downs, and generally jail-proof jobs.

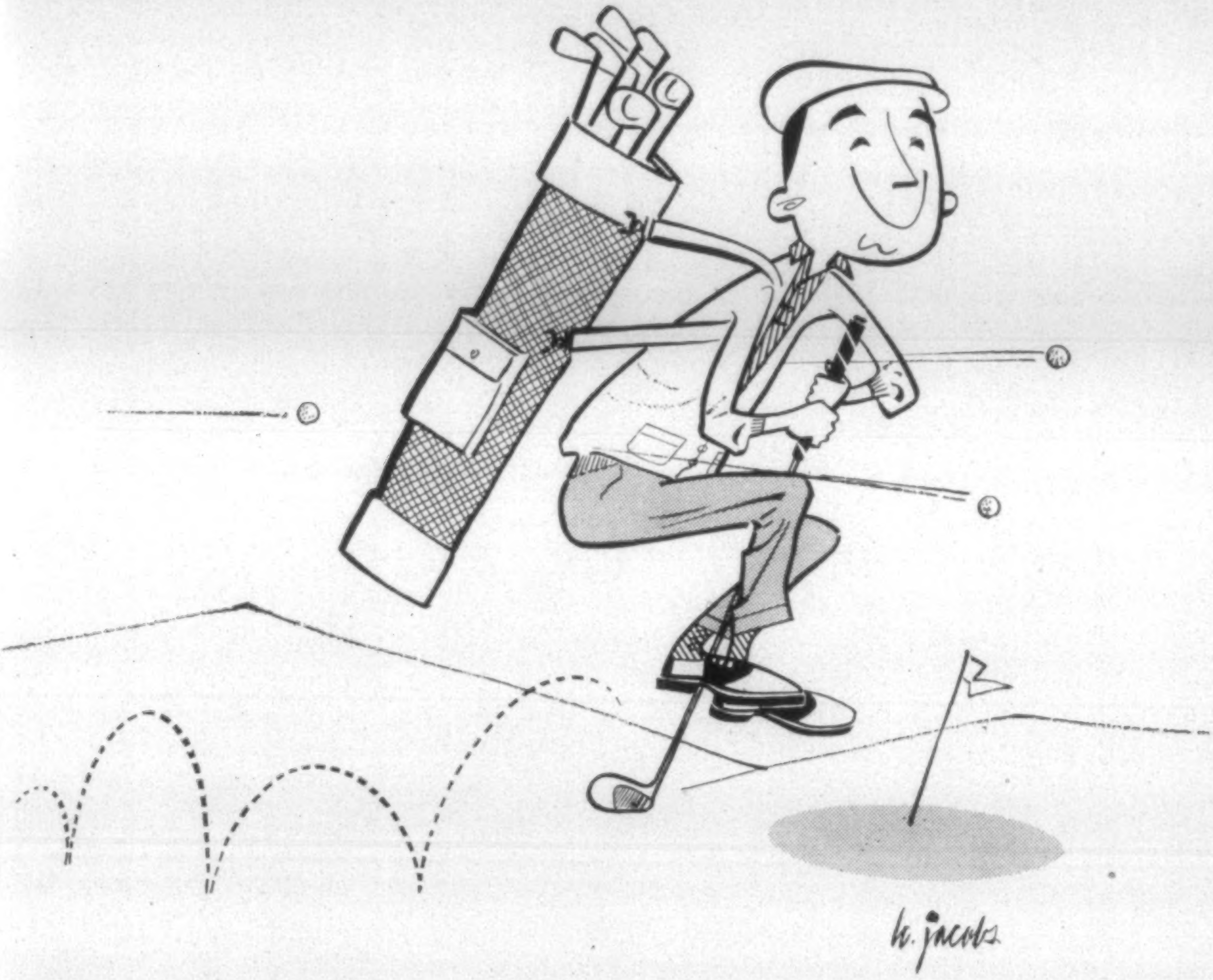
Senator McClellan said he has enough data on labor rackets and extortion to keep his committee fully occupied for at least two years. From the domain of Beck and Brewster in the Northwest, he is focusing attention on teamster activities in New York, Scranton and other Eastern cities. He wants to know what the union has done with its huge monthly income from about 1,500,000 members, and the condition its advertised pension and welfare fund is in.

Frank Brewster, president of the teamsters 11-state Western Conference, was linked by several witnesses as promoter of underworld activities in Portland, Ore. Testimony was that he sent a gambler and vice lord of Seattle to Portland to take over, and that the man worked closely with Brewster's international organizer in Oregon. Proposed vice activities included everything in the catalog, with wide open gambling, horse books, all-hours "clubs" and taverns, and control of the police and sheriff's offices.

The union's international organizer, Crosby, defiantly denied that he had joined with Brewster's emissaries to make Portland "the most wide open city on the continent." He denied collusion with gangsters to take secret options on land that would be sought by the city for an $8 million "recreation palace," for which he was one of the city's commissioners, and would pass on the land purchase. He denied trying to get the chief of police fired for refusing to take orders.

Crosby testified that some teamster locals have as high as 6,000 members, and only 30 or 40 attend the membership meetings. Testimony showed that in this union there is little sign that officials even try to have a contact with the members. Through union shop contracts and enforced payment of dues it is not necessary for the officials to know what members want or need. The secret of union strength, and unlimited power of officials, is in compulsory union membership.

Letters from rank and file members of unions are pouring in on Senator McClellan at from 1,000 to 5,000 a day asking for relief from union abuses. Some



Says a printer, whose name is J. Draper,
"Since Dillard brings all of my paper,
My shop's running smooth . . .
Boy, it's right in the groove . . .
Gives me time here and there for a caper!"

Dillard PAPER COMPANY

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1926 "IF IT'S PAPER" 1957

letters are prayerful; others are profane, but all ask to get out from what can well be called "a bondage." Many writers dare not voice their grievances publicly, and say they are helpless in the grip of union strong arm agents and goons.

Indiana has become the first industrial state, as well as the 18th state to adopt a right-to-work law, outlawing union membership as a condition of employment. The law was passed in the face of bitter union opposition, in a state where unions claim 41 per cent of the workers. Governor Handley signed the law as a jeering, placard-waving crowd, estimated between 5,000 and 10,000, overran the Capitol grounds and attempted vainly to break open the door of his office.

Leaders of both parties in the House confess they are stuck with the Eisenhower $71.8 billion budget, and don't know where to cut it. Secretary Humphrey's statement that it ought to be cut, but not saying where, has left them with the bag. Voters at home, in their letters, are clamoring for cuts, and half of them blame Congress for its size.

Government has become so vast, and spending so stupendous, that committees in Congress are unable to grasp the details. It is shot through and through with spending proposals for the "home districts" of senators and House members, much of it based on the riot of authorizations that poured through the last Congress. Members will not take shots at other members' "pidgeons," and fear to urge cuts for possible danger to their own "pidgeons."

The public debt stands now at $275,906,294,121.74, almost the war-time high level, with interest payments of $8,277,188,823.65 this year. Various items that may be added to the spending next year can raise the debt by possibly $2 billion. Of these is the proposal to grant $1.3 billion as school aid construction and $900 million as school credit assistance to the states. Civil defense is asking for $50 million next year, against $10 million this year. Atomic energy is slated for $120 million next year, against $50 million this year.

A bill is reported out by the House Veterans Committee to require the Federal Government to invest more than $1 billion in G.I. housing mortgages. An amendment will be offered from the floor to increase interest rates on G.I. mortgages from the present 4 1/2 per cent to five per cent, equal to interest rates on F.H.A. and other construction loans. Indication is the President will veto any bill requiring the government to make direct loans for G.I. housing.

Congress is told by Administration sources that foreign aid, economic and military, must be continued as long as Communism remains a threat to world peace. It is estimated that aid spending will continue indefinitely at a level of about $8 billion a year. Efforts are being made to separate the aid, and clearly label it under various names. But it counts up to the same thing, and the money is spent, under whatever name it is called.

Communists in convention in New York pledged "full participation and support for the all-sided anti-segregation movement in the South." Their program calls for action for equal employment everywhere, desegregation of schools, and support for N.A.A.C.P. The party voted to "continue to follow the Moscow Marxist-Lenin line," and set its chief task to "strengthen, rebuild and consolidate the Communist party." In racial segregation it said it would seek to uphold "the mandates of Federal courts."

George Meany is having plenty of trouble with his new C.I.O. friends, most of whom accept his leadership with reservations. Some want to go their own way, dragging the merged union with them. This is true of the C.I.O. desire to run the union's "foreign affairs" to suit itself, and to set up standards that shall be accepted as the union "party line." Meany has ideas of his own, and the air heats up fast in secret sessions behind closed doors.

NOTHING

TURNS OUT

THE GOODS

LIKE *Borden's*

VERSATILE

WARP-SIZING

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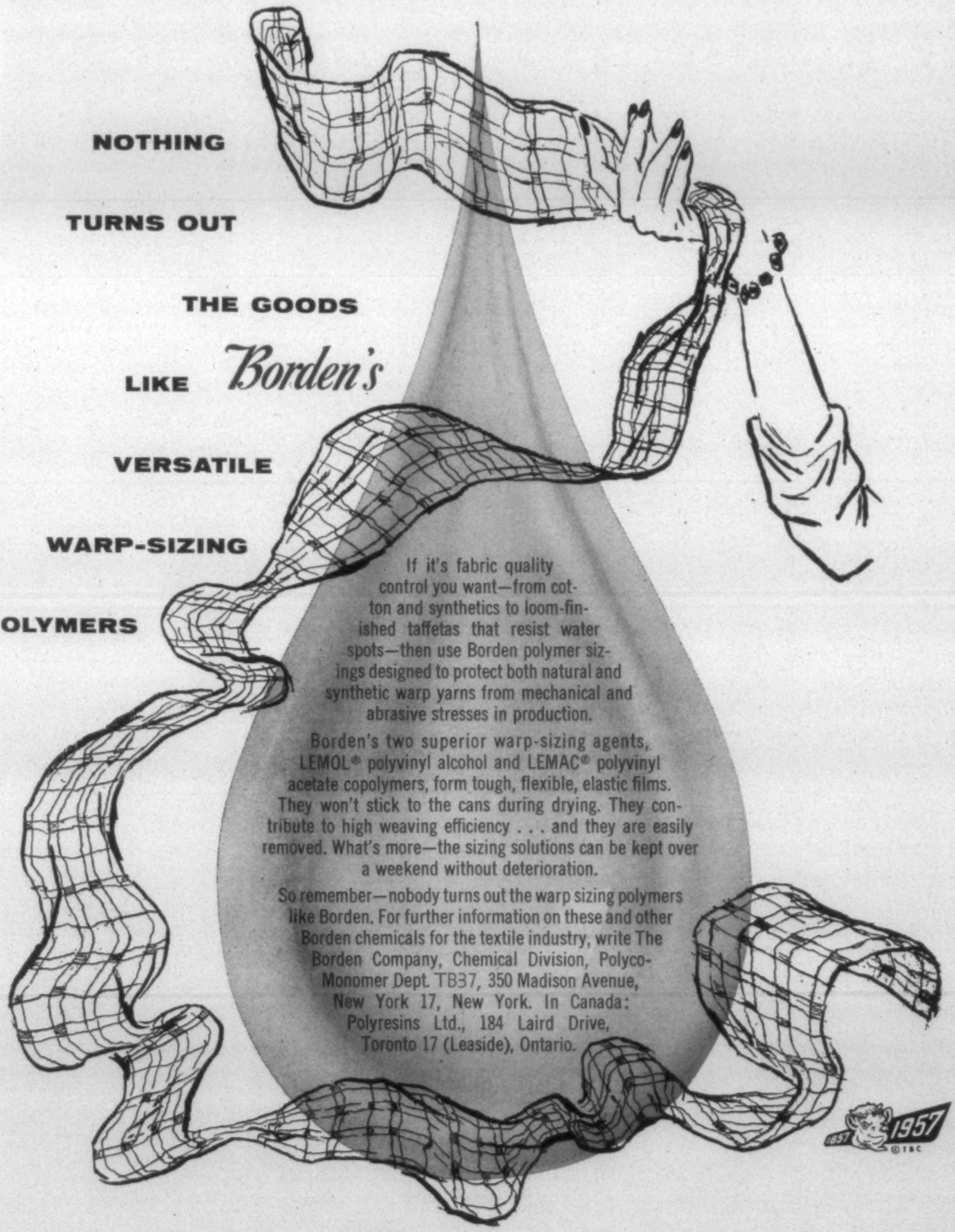

If it's fabric quality control you want—from cotton and synthetics to loom-finished taffetas that resist water spots—then use Borden polymer sizings designed to protect both natural and synthetic warp yarns from mechanical and abrasive stresses in production.

Borden's two superior warp-sizing agents, LEMOL® polyvinyl alcohol and LEMAC® polyvinyl acetate copolymers, form tough, flexible, elastic films. They won't stick to the cans during drying. They contribute to high weaving efficiency . . . and they are easily removed. What's more—the sizing solutions can be kept over a weekend without deterioration.

So remember—nobody turns out the warp sizing polymers like Borden. For further information on these and other Borden chemicals for the textile industry, write The Borden Company, Chemical Division, Polyco-Monomer Dept. TB37, 350 Madison Avenue, New York 17, New York. In Canada: Polyresins Ltd., 184 Laird Drive, Toronto 17 (Leaside), Ontario.

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IF IT'S A *Borden* *Chemical* IT'S GOT TO BE GOOD!

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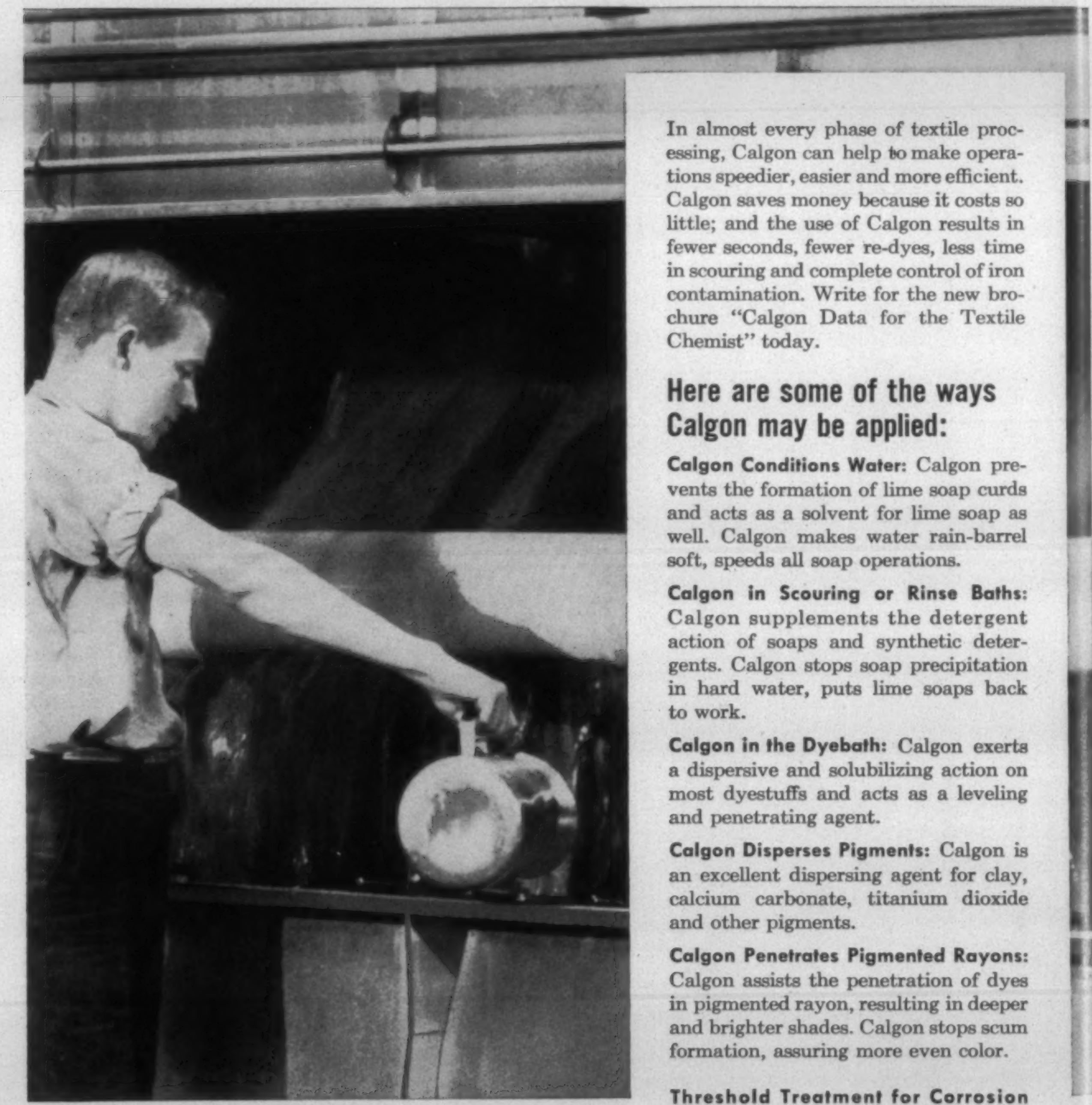
Textile Processing Problems?...*use Calgon**



In almost every phase of textile processing, Calgon can help to make operations speedier, easier and more efficient. Calgon saves money because it costs so little; and the use of Calgon results in fewer seconds, fewer re-dyes, less time in scouring and complete control of iron contamination. Write for the new brochure "Calgon Data for the Textile Chemist" today.

Here are some of the ways Calgon may be applied:

Calgon Conditions Water: Calgon prevents the formation of lime soap curds and acts as a solvent for lime soap as well. Calgon makes water rain-barrel soft, speeds all soap operations.

Calgon in Scouring or Rinse Baths: Calgon supplements the detergent action of soaps and synthetic detergents. Calgon stops soap precipitation in hard water, puts lime soaps back to work.

Calgon in the Dyebath: Calgon exerts a dispersive and solubilizing action on most dyestuffs and acts as a leveling and penetrating agent.

Calgon Disperses Pigments: Calgon is an excellent dispersing agent for clay, calcium carbonate, titanium dioxide and other pigments.

Calgon Penetrates Pigmented Rayons: Calgon assists the penetration of dyes in pigmented rayon, resulting in deeper and brighter shades. Calgon stops scum formation, assuring more even color.

Threshold Treatment for Corrosion Control†: Calgon prevents the contamination of process water from iron corrosion products. Calgon Threshold Treatment is the most economical and efficient method for eliminating iron contamination.

CALGON COMPANY

A DIVISION OF **HAGAN** CHEMICALS & CONTROLS, INC.
HAGAN BUILDING, PITTSBURGH 30, PENNSYLVANIA
DIVISIONS: CALGON COMPANY • HALL LABORATORIES

*Calgon is the registered trademark of Hagan Chemicals & Controls, Inc., for its sodium phosphate glass (sodium hexametaphosphate) products.

†Fully licensed for this use under U.S. Patent No. 2,337,856.

new WAK

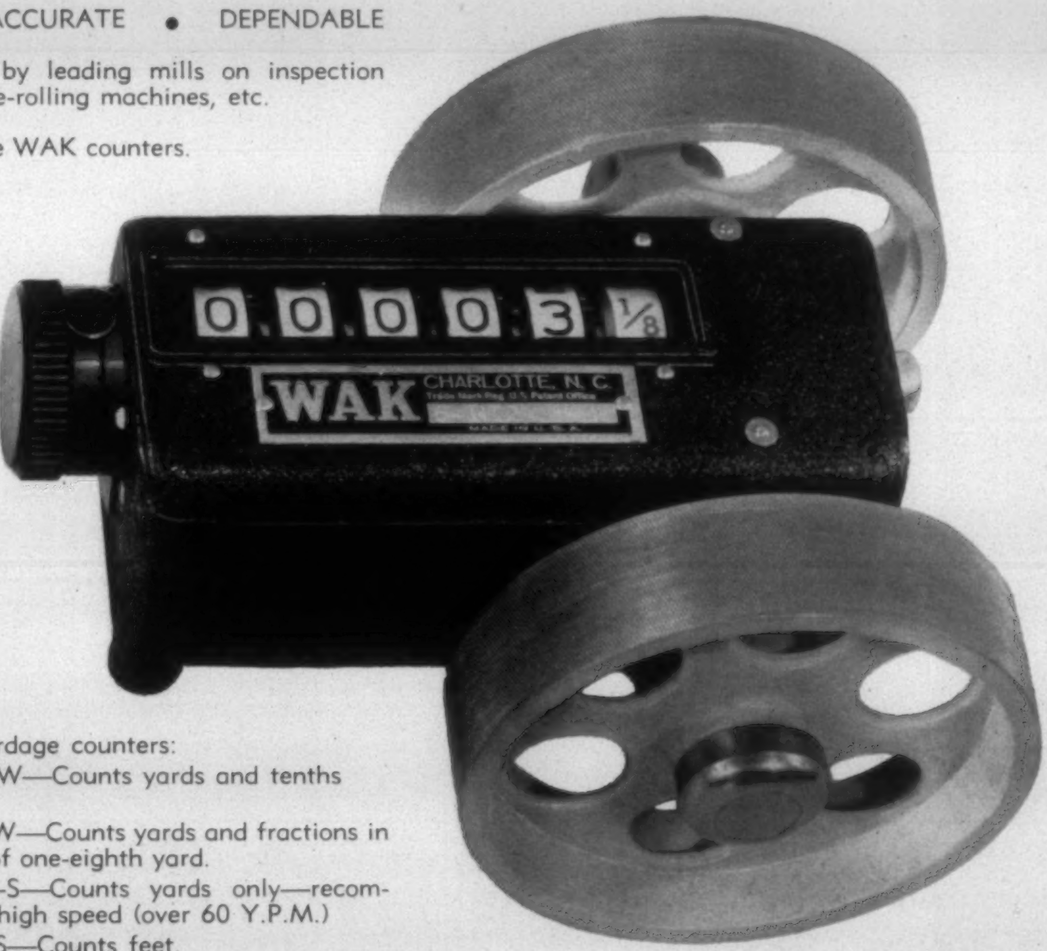
pronounced **WAK**, same as **TACK**, not **W. A. K.**

double wheel yardage counter

RUGGED • ACCURATE • DEPENDABLE

used extensively by leading mills on inspection tables, slashers, re-rolling machines, etc.

Over 700 mills use WAK counters.



Length: 6¾" Height: 3⅞"
Width: 5⅛" Weight: 3 lbs.

All Standard Counters
$32.50 each F O B Charlotte.

Standard type yardage counters:

No. 6—RLY—D-W—Counts yards and tenths yards.

No. 6—RLY—F-W—Counts yards and fractions in increments of one-eighth yard.

No. 5—RLY—H-S—Counts yards only—recommended for high speed (over 60 Y.P.M.)

No. 5—RLF—H-S—Counts feet.

Combinations of above can be furnished to give both total and sub-total count. Write for further details.

Measuring wheels: Knurled aluminum is standard. Rubber covered or cork covered can be furnished.

other WAK counters

reset
non-reset
single
double
triple

pick counters
hank clocks
yardage counters
twister counters

hosiery counters
inspection table counters
ratchet counters
sewing machine counters

special counters
quick shift electric counter
preset counter
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"You can count on WAK counters"

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Charlotte 3, N. C.

For the Textile Industry's Use

– NEW MACHINERY, EQUIPMENT AND SUPPLIES –

Dayton Drafting Apron

An improved drafting apron for spinning frames has been developed by the Dayton Rubber Co. The new apron is said to eliminate chattering, or uneven operation of machines, in both single and multiple apron systems. In addition, the apron's improved inner surface stops lint collection and the improved exterior resists cracking and checking. Perfected in 2 years of testing new compounds and manufacturing techniques, the apron is being produced in sizes to fit every spinning frame.

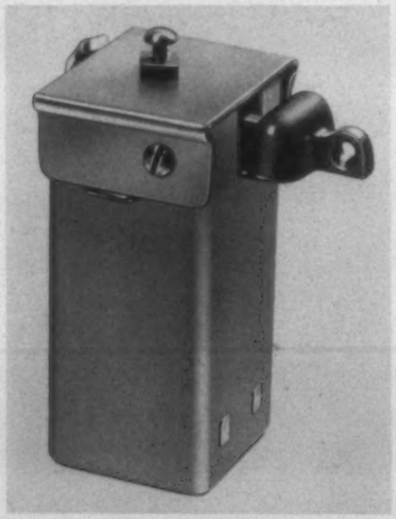
(Request Item No. C-1)

Triton Surfactant

A new 100% active nonionic wetting agent and detergent with unusually low foaming properties is announced by Rohm & Haas Co. Called Triton CF-21, it is recommended especially as a penetrant in desizing baths, a detergent and penetrant for continuous boil-off, as well as for use in pigment padding of vats or pigments and in dyeing direct, basic and dispersed colors. Technical notes describing properties and applications are available upon request.

(Request Item No. C-2)

Draper Shunt Magnet



No. 87 a.c. shunt magnet for use with the Draper K-A electrical warp stop (Draper Corp.)

Draper Corp. is introducing the new #87 AC Shunt Magnet for use with the Draper K-A electrical warp stop, designed to reduce wear of component parts and permit easy adjustments and servicing. Materials used throughout are selected for specific properties required in an electrical unit to assure long, trouble-free life, Draper reports. The magnet coil is wound on a solid 1-piece nylon bobbin, and the shunt is securely fastened to the bobbin head. This positive relation of coil parts permits more accurate settings. A new lock spring holds the coil firmly in place, insures correct and uniform positioning of coils and simplifies their replacement. Operating failures due to vibration are minimized.

(Request Item No. C-3)

Tap-Touch Stapler

Container Stapling Corp. announces the latest innovation to its Automagic Tap-Touch staplers—the Model TAP-A. The unit is equipped with 1 stapling head, and is air-operated with fully pneumatic controls. The air valves are operated by completely mechanical means. The machine is fully equipped with air filters, regulators, lubricators and gauges. The manufacturer points out that the average carton can be closed for less than ½ cent since only 4 staples are required for secure closure. Any style corrugated or fibre board box can be stapled top or bottom. In addition, flat cartons can be set-up using the carton stop member as a post. No electrical connections are required. The only connection necessary is to a supply of compressed air at a minimum of 60 p.s.i.

(Request Item No. C-4)

Floor-Mounted Supports For Overhead Conveyors

Standardized floor-mounted supports, specifically designed to simplify and reduce the cost of installing overhead cable conveyors, are announced by The Tipp Mfg. Co. Development of the new supports now permits Tipp to offer what are believed to be the first complete "package" cable conveyor systems. Biggest advantage of the new floor-mounted supports is said to be that they eliminate the problems involved in installing cable conveyors when roofs are weak, too high, or cluttered with supports for other equipment and utilities. The new supports may be lag bolted to the floor or may be simply placed on the floor and then sway-braced to plant walls. In most cases, installation is so simple that a plant's own maintenance force can erect cable conveyors incorporating the new supports in a relatively short time. Thus, there is no need for the engineering, scheduling or erection, and lengthy down-time formerly required in connection with conveyor installations, Tipp points out. Pre-engineered hollow pipe stanchions are used with standard Tipp brackets and adapters to make up the supports and all the parts are completely interchangeable with existing Tipp equipment. Bolts are used exclusively to assemble Tipp cable conveyor systems, to insure easy assembly and alteration.

(Request Item No. C-5)

Lanasyn Bordeaux GRL

Sandoz Chemical Works Inc. is introducing Lanasyn Bordeaux GRL, a new addition to its line of neutral dyeing premetallized dyes for wool, nylon and silk. The light fastness of this dye is said to be excellent on wool, and even higher on nylon. Water fastness tests reportedly indicate that it meets all requirements for dyeing automotive fabrics. Under conditions of alkaline milling, it proves itself a very superior color. Since crocking tests show excellent ratings for wool and nylon, it is especially recommended for use on decorative fabrics. A promotional folder illustrating Lanasyn Bordeaux GRL can be obtained by using this journal's reader service request cards.

(Request Item No. C-6)

Coiler Stands

Southern States Equipment Corp., Hampton, Ga., has announced a line of complete coiler stands for 16", 18" and 20" cans. They can be supplied for can heights of 36" or 42". Outstanding features of these new coilers are (1) ball bearing construction throughout; (2) roller chain table drive; and (3) quick easy installation on any make of cotton card. The base and head assemblies are mounted on a strong tubular steel stand. Both of these assemblies may be rotated to face in any direction desired.

(Request Item No. C-7)

Lighted Switch

A new dual-purpose, lock-down switch has been added to the line of illuminated push-button switches being marketed by Micro Switch, a division of Minneapolis-Honeywell Regulator Co. The new lighted switch functions as a conventional push-button type when pushed straight down. When pushed and turned approximately 20° clockwise the switch is maintained in the operated position. When turned counter-clockwise from this position, the switch pops up to unoperated position.

In many applications, the company points out, this feature will allow the switch to function as 2 switches in 1. It can take the place of an alternate-action pushbutton and also provide optional momentary action. These features suggest many applications in which the user can save on the cost of panel space, relays, indicator lights, wiring and power, as well as on the cost of the switch itself. A new subminiature bulb, in-

MORE THAN 2½
MILLION SPINDLES
NOW EQUIPPED WITH
ROBERTS HIGH DRAFT

ROBERTS SPINNING NEWS

PUBLISHED BY
ROBERTS COMPANY
SANFORD,
NORTH CAROLINA

VOL. 12 SANFORD, NORTH CAROLINA NO. 2

MOST BALL BEARINGS USED IN ROBERTS SPINNING FRAMES

The use of ball bearings at many key points of a spinning frame not heretofore found possible has been accomplished in the Roberts M-1 frames.

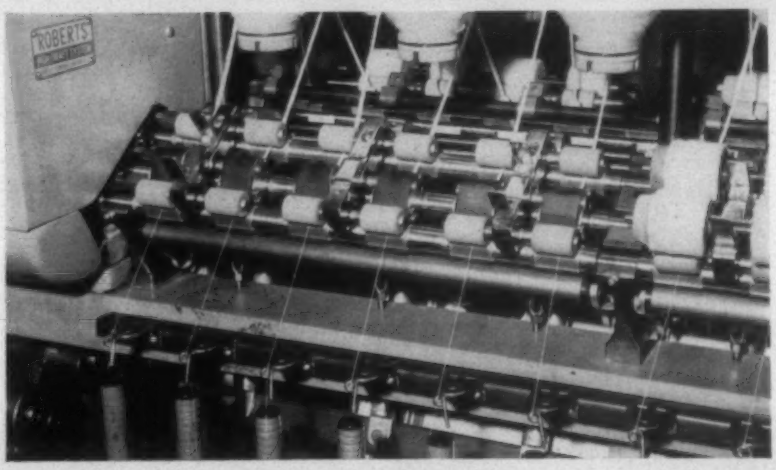
This liberal use of ball bearings results in a spinning frame with smoother performance, greater dependability and freedom from lubrication. The need to replace wearing parts and future maintenance expense is eliminated.

The key points in Roberts Spinning Frames now ball bearing equipped are:

lifting rod rolls
wave shafts
cross shafts
builder motion pivots
crown gear swing arms
complete lay trains
intermediate gears
front roll gears
upright shafts
jack shafts
cylinder bearings
and, of course, in
spindles
tape tension pulleys
top roll suspension system

The long felt desire by practical mill men to apply sealed ball bearings to spinning has been successfully accomplished in the Roberts M-1 Spinning Frames.

ROBERTS TOP ROLL SUSPENSION USES BALL BEARINGS ALL 3 LINES



A top roll suspension system which uses double-row ball bearings in front, middle and back lines and incorporates many other important design advantages has been announced by Roberts Company

Adaptable to several drafting systems as well as its own, the Roberts Top Roll Suspension embodies all the following features, many not found in other arrangements:

1. Cots are buffed on standard equipment, without attachments.
2. Cots revolve together making lap removal simpler.
3. Full length revolving clearers are used.
4. Front and back rolls are interchangeable making sequence buffing possible.
5. All three lines of rolls have double-row ball bearings.
6. Has controlled self-alignment.
7. Cots have ½" hole diameter.
8. 2-piece labyrinth seal is protected from lint entrance and roll picker damage.
9. Double row bearing raceways are ground directly into ½" shafts.
10. Bearings grease-packed for life.
11. Conventional dead-weighting or new spring weighting optional.

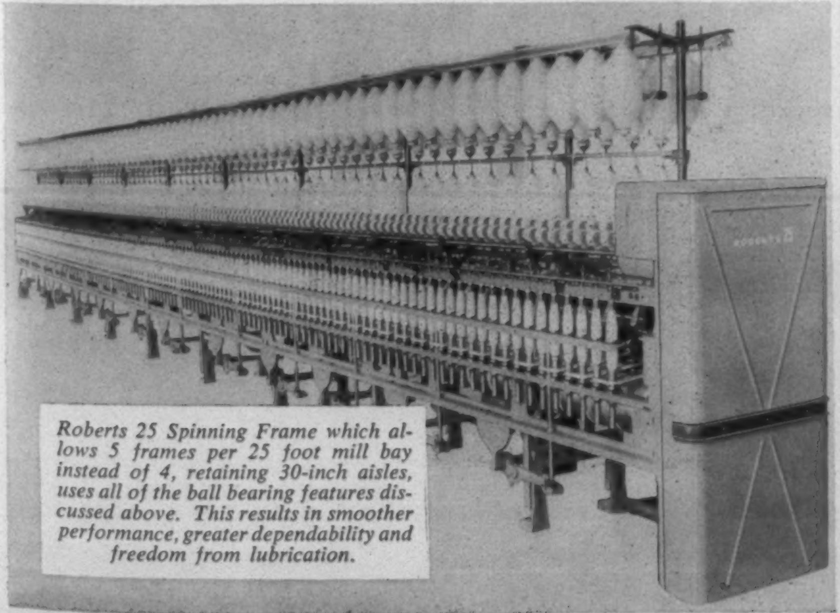
An alternative arrangement also available employs a ball bearing top roll and special suspension on the front line only with Roberts Cap Bars and solid top rolls on middle and back top rolls.

Roberts also continues to offer its No-Oil Cap Bar and Saddle system for all three lines, now installed in more than 2½ million spindles.

BALL BEARING SPINDLES FIND WIDE ACCEPTANCE

Since early 1956 when Roberts Ball Bearing Spindles were first introduced, several hundred thousand have been installed in spinning frames.

Mill men report their performance exceptionally dependable, even at the highest operating speeds.



Roberts 25 Spinning Frame which allows 5 frames per 25 foot mill bay instead of 4, retaining 30-inch aisles, uses all of the ball bearing features discussed above. This results in smoother performance, greater dependability and freedom from lubrication.

READ THE FINE PRINT . . . IT'S IMPORTANT!

IF WEAVE ROOM OR SLASHER LUBRICATION IS YOUR PROBLEM, READING THIS AD CAN SAVE YOU TIME AND MONEY:

LOOM LUBRICANTS

Since there are various types of looms running at different speeds and under various working conditions, we have made a variety of lubricants which have proven to cut the amount of lubricants, plus labor.

★ **G-C BEN BOY NO. 55-B** is a wonderful bearing grease for all type ball and roller bearings. Either fast or slow, hot or cold.

★ **G-C LOOMOL G-350** is a combination gear and cam lubricant and can be used as a general purpose lubricant.

★ **G-C GEARCO A & W** is a semi-fluid chain and gear lubricant for mills who prefer a semi-fluid lubricant instead of a grease.

★ **G-C NON-MELTING OILS** are general purpose oils (non-soap) that have proven their worth in the Textile Trade. They do not splash or run, last longer and give better bearing life.

★ **SLASHER**—Bearings are no problem with G-C Ben Boy No. 55-B. Your equipment will run longer at higher speeds and higher temperatures for less money when you use the modern lubricant for modern equipment.

SPINNING LUBRICANTS

Top Rolls have been one of the most delicate lube problems in the mills.

G-C Non-Melting Oils have cut lube cost as much as 15 to 40 per cent.

G-C Non-Melting Oils were the first non-soap lubricants ever offered to the entire Textile Industry and records prove the fact that they are the finest products offered today.

We will welcome an opportunity to prove our lubricants will save you down time and labor. Some of the finest Textile Mills in the country have found that the complete line of Ben Boy and Non-Melting Lubricants have proven their place in the mills.

Write, wire or phone

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Box 101 G-C **Phone 2-1428**
MACON GEORGIA

dependent of the switch circuit, illuminates the switch's translucent button, offering the compactness of built-in indication. The position of the button, locked down or unoperated, gives additional indication. Two precision subminiature basic switches, actuated by positive over-center snap-action, provide exceptionally reliable operation. The switches are listed by Underwriters' Laboratories at 5 mps. 125 or 250 v. a.c.

(Request Item No. C-8)

Static-Eliminating Cot

A new textile cot or roll covering for fiber spinning that eliminates static at the source has been developed by the Dayton Rubber Co. Such electrical charges cause fibers, particularly those of synthetics, to stick and be "lapped up" on the spinning frame rolls. This not only affects yarn quality but means costly down-time as well.

Designated Dayco EW 661, the new cot is made of a special rubber compound that does not permit static building. In addition to its static-free qualities, the cot remains hard and dry despite heat and humidity, and it resists all known oils, Dayton reports. The new compounding is a radically new approach to the static problem, according to company researchers. Up until now, materials have been put into cots to dissipate or ground out electrical charges rather than nip them at the point of origin.

(Request Item No. C-9)

Liquid Defoamer

Air Reduction Chemical Co. reports that its new liquid defoamer, Surfy-nol 104A, has shown excellent results in textile sizing. Surfy-nol 104A is a ditertiary acetylenic glycol, a class only recently recognized as low-foaming, nonionic surface active agents. The new addition to the line is the first of these to be developed specifically for defoaming. A bulletin describing the new product is available.

(Request Item No. C-10)

Mindicorder

A large indicating scale and pointer have been incorporated into The Dickson Co.'s standard Mindicorder to provide easy reading of temperature or pressure from a distance. These new recording indicating instruments are known as Mindicorders. The indicator scale is mounted above the recording chart, and to provide even greater ease in reading, the single door is designed with separate viewing windows. A fluorescent pointer indicates the temperature or pressure that is being recorded on the chart below. A clearly legible indication seen from a distance will save operators valuable time by making it unnecessary to step close to the recorder to read current pressure or temperature. This new instrument provides a clear indication, together with the chart of constantly varying conditions.

The Mindicorder units are 9" wide, 10¾" high and 2" deep. The units may be supplied for most chart ranges now available for the Mindicorder, design 1 and design 2. These include some 100 different chart ranges for either design. The instruments are available for wall or panel mounting. Installation is simple and operation requires no special skill or knowledge, the company reports.

(Request Item No. C-11)

Nonflammable Solvents

Du Pont is offering 3 new nonflammable solvents that will bite into and remove oil, grease and dirt without harming delicate metal parts or electrical insulation. Adaptable to vapor degreasing or cleaning by liquid immersion, the solvents will be marketed under the Du Pont Freon trademark. The most important use for the solvents proved to date, the company reports, is in cleaning both new and reconditioned motors. Biggest problem there in the past has been the tendency of cleaning solvents to attack insulation on the motor wiring, weakening or removing it sufficiently to cause short-circuits when the motor is placed in operation. Three years of tests indicate that the Freon solvents will not soften, craze or dissolve any of the commonly used wiring insulation materials, Du Point reports. All 3 types are available in container sizes ranging from 10 to 55 gals.

(Request Item No. C-12)

Drawn Cup Roller Bearings

Drawn cup roller bearings (The Torrington Co.)

Drawn cup roller bearings for installations requiring high capacity in minimum space have been introduced by The Torrington Co. Compact and light, the roller bearings are designed for applications demanding precision, minimum cross section, high-speed endurance or long pre-greased life. Field tests have demonstrated highly satisfactory service in the textile field.

In these high-capacity precision bearings, spherical end rollers are retained and guided by 1-piece hardened steel retainers. As non-separable assemblies, they are easily handled and installed. They may be mounted so that a hardened and ground shaft serves as inner race, facilitating use of larger and stiffer shafts. Inner races are available for use with soft shafts. They are installed by a press fit without snap rings or shoulders. This feature simplifies design and further reduces costs.

End guidance stabilizes the rollers and leaves the center open for free circulation of lubricant. The turned-in lips of the bearing cup, riding close to the shaft, exclude dirt and grit. At the same time they retain lubricant which is circulated by the rollers themselves to all bearing contact surfaces. The generous provision for lubricant storage and circulation allows prolonged service without re-lubrication. Currently the new bearings are made in 6 standard sizes, from 5/16" to 1⅛" shaft diameters. All are dimensionally interchangeable with Torrington drawn cup needle bearings. Contemplated production includes a complete line in shaft sizes from 5/16" to 1½". A descriptive folder on the bearings is available.

(Request Item No. C-13)

Wire Tying Machine

General Strapping Corp. is offering a new, fully-automatic wire tying machine capable of operating at a speed of 20 wire ties per minute. Called the Auto-Wire Strapper, the machine can tie packages of different sizes as they are fed in without any adjustment being necessary. The strapper operates with 14 through 19-gauge wire, depending on type and weight of package to be tied. Self-contained, it is ready for operation as quickly as set-up.

(Request Item No. C-14)

Electronic Motor Control

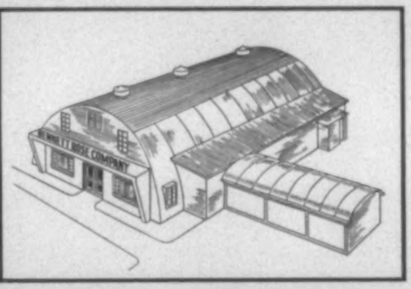
The Gerald K. Heller Co. announces a new acceleration and fine speed controller called the Heller CX25 electronic controller. It is designed to provide accurate acceleration and speed control of shunt wound d.c. motors ranging from 1/50th to ¼ h.p. By means of the acceleration control, Heller points out, the motor can be started at any speed either immediately or gradually over a half-minute interval. The fine speed adjustment works in conjunction with the coarse speed control. Motor speed may be accurately and steplessly varied by as little as 220 r.p.m. The controller operates on 1 c3j tyratron tube that automatically increases voltage to compensate for additional loading of the motor armature. Thus the speed of the motor is maintained with good regulation, Heller points out.

(Request Item No. C-15)

Wireless Intercom System

Talk-A-Phone Co. has announced a new 6-station selective wireless intercom system designed to operate on any one of 6 channels without interference with other communication within the system. Selective wireless staff stations and selective paging with reply are featured in the new model. The wireless staffs are designed to operate

MAKES
BETTER
PRODUCTS
FASTER



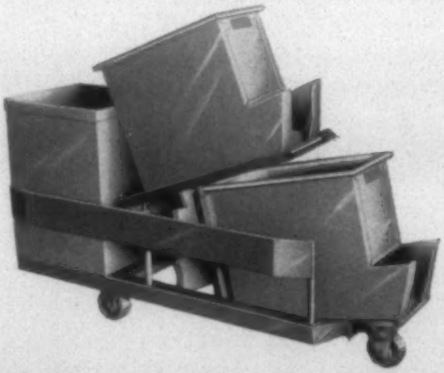
CUT WEAVE ROOM COSTS WITH OUR NEW TYPE BATTERY FILLING EQUIPMENT

This photo shows our equipment in use at one of the large weave rooms in one of the South's most progressive textile plants where they increased plugging from 480 bobbins per hour to 1050 per hour on Quill yarn and from 480 to 860 bobbins per hour on Spun yarn. It reduces costs of handling filling at the batteries. We can help you cut weave room costs.

We are equipped for skilled fabrication:

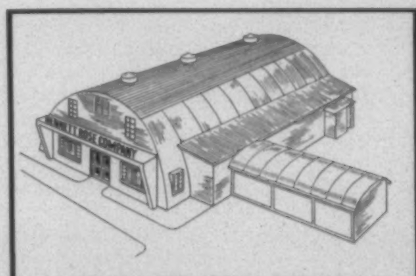
- **Steel**
- **Wood**
- **Fibre**
- **Aluminum**

Let us know your needs



New, sturdy DOFF TRUCK used to transport filling from spinning room to weave room with greater ease. Let us help you save handling costs with our New Type Boxes, Trucks and Racks.

FULL INFORMATION ABOUT OUR EQUIPMENT WILL BE FURNISHED ON REQUEST
CALL: SPARTANBURG 3-9223



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Ring Travelers

OUR SPECIALTY!

Our specialty is making Dary ring travelers—an item well and favorably known to the textile trade for more than half a century. Though times change, we at Dary hold to one course without deviation. We continue to serve, by pursuing our specialty.

When you need ring travelers, call on our experience to aid your choice. Consult your friendly Dary representative!

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THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS
LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD "JACK" RHYMER, BOX 2261, GREENVILLE, S.C.

in combination with the Talk-A-Phone selective wireless masters, and can be used separately as well as in groups of 2 or more stations to provide individual wireless systems. Exclusive with Talk-A-Phone, a system of wireless staffs operating on a given channel will not interfere with another similar system operating on another channel. This permits individual systems to be used in the same area on the same transformer without interference. Conventional 2-station wireless systems now available cannot provide this flexibility, the company points out. (Request Item No. C-16)

Wetting Agent & Detergent

A new 100% active nonionic wetting agent and detergent said to have unusually low foaming properties has been developed by Rohm & Haas Co. Called Triton CF-21, it is recommended for many textile wet processing operations, especially as a penetrant in desizing baths, a detergent and penetrant for continuous boil-off, as well as for use in pigment padding of vats or pigments and in dyeing direct, basic and dispersed colors. (Request Item No. C-17)

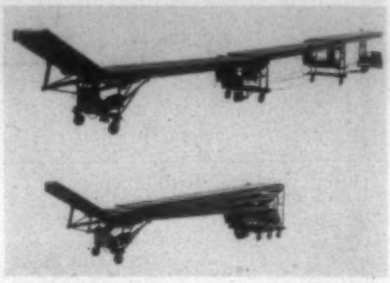
Fischer & Porter Instruments

Fischer & Porter Co. announces a new line of low-cost, small-sized instruments for indicating, transmitting and controlling pressure and temperature. The new line—to be called the Series 1450—will be housed in cases made of plastic-impregnated fiber glass. The fiber glass case—unique in process instrumentation — makes the new line particularly suitable for use in corrosive atmospheres. The color is not just a surface finish but extends throughout the entire material.

Instrument options include single or dual indicators, single indicator with dual alarms, indicating controller with any mode of control, and indicating transmitter. The transmitter can provide pneumatic outputs, resistance outputs or differential transformer outputs. Four controller options are offered: (1) universal controller with on-off, proportional, differential gap and manual reset; (2) wide band proportional; (3) wide band proportional plus automatic reset; and (4) wide band proportional plus automatic reset plus derivative.

Construction features make the new 1450 line a most versatile and reliable instrument. The complete instrument can be removed from the case for servicing. Process and set-point pointers are mounted concentrically on the same center to simplify zero adjustments and range changes. All adjustments are readily accessible. Optional external set point is simple yet tamper-proof; a plug in the door can be removed to expose the adjustment screw. Alignment-type pointers and the large 5" indicating scale enable at-a-glance observation of process conditions. All exposed parts are either fiber glass or 316 stainless steel. Polyvinyl chloride gasketing around the door and input lines seals out moisture and dust. The instrument is suitable for surface, panel or pipe mounting. The door, which can be completely removed, is held in place by 2 stainless steel ¼-turn cam-actuated knobs. A keeper is provided between the door and case to prevent possible dropping of door. Panel cutout size is 8¾" x 10¼".
(Request Item No. C-18)

Telescoping Belt Conveyor



Power-driven telescopic belt conveyor (The Wilkie Co.)

The Wilkie Co. is offering a power-driven telescopic belt conveyor designed to handle a number of material handling applications. The conveyor is supplied in 2, 3 or 4 sections. Each section may be 10, 12, 14 or 16 feet long. Belt widths are 10, 20 or 30 inches. The belt on each section is driven by a separate motor and the conveyor itself is mobile and telescopes by power drive. Loads up to 300 lbs. per lineal foot can be handled. Differences in level between loading dock and trailer bed are automatically accommodated due to the pivotal action between sections. An optional elevating boom, which eliminates lifting, travels from the floor to a height of 6'.
(Request Item No. C-19)

New Load Wheel For Material Handling Equipment

A new load wheel for material handling equipment has been introduced by Greer Industries Inc. Called Disowheel, the new wheel has a tire composed of what Greer terms Disogrin, whose properties are said to minimize or eliminate the deficiencies common to wheels presently in use. Disowheel's load-carrying capacity has been rated up to 2,000 lbs. for a 4" x 3" wheel by one leading manufacturer of material handling equipment, Greer reports. A similar size wheel made of rubber would be rated at approximately 400 lbs.; a plastic wheel at approximately 800 lbs. Other features of Disowheel are said to be its resilience value of from 25% to 60%, its outstanding oil, ozone and sunlight resistance and its excellent floor protective qualities.
(Request Item No. C-20)

BLOOD IS ALWAYS NEEDED
Call Red Cross

For the Mill Bookshelf

Orlon Dyeing Procedures

The technical service section of Du Pont's textile fibers department has announced the release of Bulletin OR-75 discussing whiter, more dyeable Orlon acrylic staple and tow. The bulletin points out that the dyeability of Type 42 Orlon fiber with cationic or basic dyes has been increased by approximately 30% as compared with recent merges of these types. This means, the bulletin points out, that (1) the saturation value of the fiber has been increased by about 30% so that a greater amount of cationic or basic dye can be applied than previously; and (2) the rate or speed at which cationic dyes are absorbed is about 30% greater.

(Request Item No. C-21)

Metlon With Mylar

The Metlon Corp. has published a revised fact booklet concerning Metlon with Mylar metallic yarn. The booklet points out that the yarn can be used on any type of loom in either warp or filling, and can be incorporated into any fabric—silks, wools, cottons and synthetics. Metlon with Mylar is made by laminating bright aluminum foil between 2 plies of Mylar, Du Pont's polyester film. Technical information is also given on the dyeing and finishing of fabrics containing the metallic yarn.

(Request Item No. C-22)

Pushbutton Switch

Micro Switch, a division of Minneapolis-Honeywell Regulator Co. is offering a newly-prepared data sheet on its turn-to-lock-down lighted pushbutton switch.

(Request Item No. C-23)

Alden Systems

A new *Alden Systems Illustrated News* is announced by the Alden Systems Co. This first edition, now available, contains timely information and application stories on automation, cost cutting methods and the latest developments in work simplification techniques. (Request Item No. C-24)

High Temperature Problems

Engineers associated with the design and operation of high temperature equipment will be interested in a reprint now available from the tubular products division of The Babcock & Wilcox Co. The paper, *High-Temperature Problems in Process Plants,* was originally given by John J. B. Rutherford, chief metallurgist of the division, at a short course on "Corrosion Problems in the Process Industries" presented by the University of California in co-operation with the N.A.C.E. The report discusses the use of steel and its various alloys, and the mechanical and physical reactions of the materials under various temperature and corrosive environments. Copies of the reprint, known as TR-544, are available free upon request. (Request Item No. C-25)

Rust Remover

Rusticide Products Co. is offering a new 4-page folder describing how Ospho, when applied to rusted metal, chemically changes rust to iron phosphate, thus preparing surfaces for regular maintenance paint.

(Request Item No. C-26)

Tin-Lined Pipe, Fittings Line Valves And Faucets

The Barnstead Still & Demineralizer Co. announces the release of a new bulletin (No. 139) which describes in detail its line of tin-lined pipe, fittings, line valves, faucets and accessories developed especially to protect distilled or demineralized water from metallic contamination. Purified water may now be piped throughout an entire building, from point of origin to point of use, through the use of Barnstead tin-lined piping accessories. All metal parts, pipe, fittings, etc., that come in contact with the pure water are lined with pure tin, 1/16" thick; and all contacts between pipes, fittings, line valves and faucets are tin-to-tin. The bulletin also describes procedures and methods of installation.

(Request Item No. C-27)

G-E Silicones

A new illustrated catalog discussing more than 115 different applications for silicones is now available from the silicone products department of General Electric Co. Designated CDS-97, the condensed 8-page catalog lists specialized literature covering product and application information as well as major G-E silicone products.

(Request Item No. C-28)

Packaging Booklet

Packaging cost reduction—from original package design to final product shipment—

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The Snap Type has all the advantages of its predecessor—virtually eliminates jack lever wear—stamped steel and case hardened cleats and rollers give triple length service—and roller bearings give you an exceptionally smooth rolling harness.

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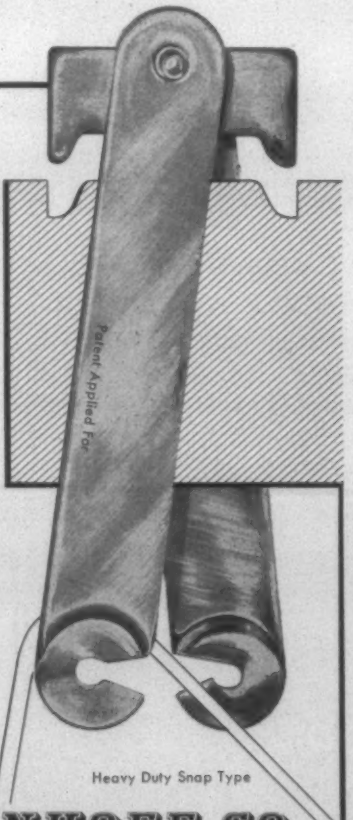

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Ideal Machine Shops, Inc., Bessemer City, N. C.

Continuous Service to Textile Mills Since 1925

is the subject of a revised Little Packaging Library booklet published by Hinde & Dauch, corrugated box producer. Titled *How to Ship More Economically in Corrugated Boxes,* the 24-page publication includes pertinent advice on the designing, testing and storing of product packages. It also offers information on the planning of the shipping department and on economy considerations in the packing, sealing, warehousing and shipment of corrugated boxes. Individual case histories pointing up cost savings through the use of specific corrugated box designs are also included in the booklet. (Request Item No. C-29)

Teflon Tubing And Rod

Heavy-walled tubing and rod of Teflon is covered in a new 2-page bulletin, T-300, published by Haveg Industries Inc. Teflon is Du Pont's tradename for tetrafluoroethylene resin. Bulletin T-300, the fourth of a series of bulletins on Haveg Teflon equipment, cites this plastic's varied mechanical properties to show its application as machined parts, gaskets, pump and valve parts. For electrical component parts, Teflon may be machined as terminals, stand-off or feed-through insulators, and bushings.

(Request Item No. C-30)

Textile Bagger

A new product bulletin describes the operation and advantages of Tele-sonic textile bagger, produced by Tele-sonic Packaging Corp. The portable, all-metal machines are easily adjustable to various sizes and shapes of products, speeding packing in bags of any material—paper, polyethylene or cellophane. (Request Item No. C-31)

Synthrapol PWS

Arnold, Hoffman's Synthrapol PWS, a nonionic surface active agent, is fully described in the company's recently issued Technical Bulletin No. 132. According to the makers, Synthrapol PWS was developed as a result of three years of research into the field of ethylene oxide condensates. Wetting and rewetting properties of Synthrapol PWS are described in the bulletin, together with the effect of builders on its detergent value, and its good compatibility with other chemicals. Laboratory tests of the detergent properties of Synthrapol PWS on cotton and wool are reported, with illustrative graphs depicting relative degree of soil removal.

(Request Item No. C-32)

Keystone RT Fitting

A new 4-page bulletin entitled *The Keystone RT Fitting . . . . Simplifies Bearing Lubrication* is announced by Keystone Lubricating Co. The folder, Bulletin BU-61, describes and illustrates the advantages of Keystone's special relief-type lubrication fitting, which can be easily attached to bearing housings of motors, machines or pillow blocks equipped with conventional relief plugs. Photographs and drawings show how this new fitting saves time and helps prevent over-lubrication of these ball and roller bearings. Features are illustrated, including the patented cap that snaps open or shut at the flip of a finger, and the internally flared body for free discharge of excess grease. A table of test results reveals how Keystone RT fittings cut lubrication time at least 80% in comparison with conventional relief plugs. (Request Item No. C-33)

Caustic Soda Safety Chart

A new safety wall chart on caustic soda is being offered by the Solvay Process Division of Allied Chemical & Dye Corp. The chart, written in nontechnical language, includes suggestions for protective clothing and equipment; rules and precautions to be followed in the unloading, handling and storage of caustic soda; first aid measures to be followed in the event of an accident; and instructions for safely thawing caustic soda in tank cars. (Request Item No. C-34)

Copper And Manganese Data For Sandoz Direct Dyes

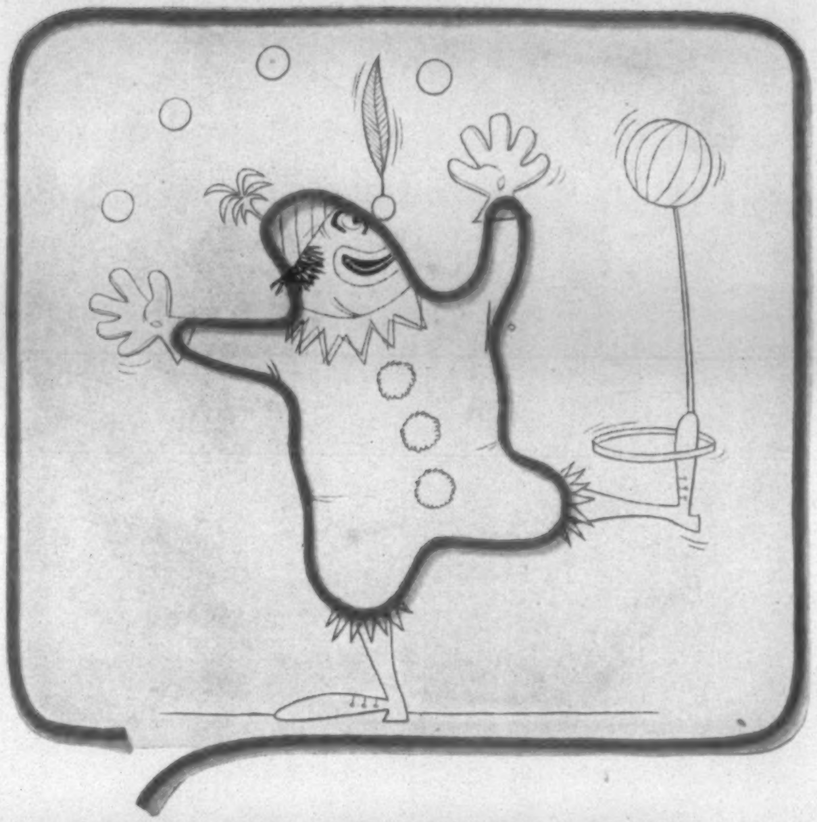
Data on the copper and manganese content of 401 Sandoz direct dyes have been published in a booklet entitled *Copper and Manganese Content of Sandoz Direct Dyes.* The information should be of particular significance to dyers and finishers working with latex-treated textiles. The figures were determined by an independent analytical laboratory, and represent the copper and manganese contents of typical dyestuff lots. (Request Item No. C-35)

Clarklift Fork Truck

Operating and maintenance features, specifications and dimensions of the new Clarklift-40 fork truck of 4,000 lbs. capacity are contained in a 4-color, 6-page brochure now available from Clark Equipment Co. Drawings illustrate such innovations as swing back hood, self-adjusting brake, adjustable upright assembly, quickly removable counterweight and other features. On-the-job photos show applications of the machine. Charts and graphs detail operating characteristics such as lift speeds, drawbar pull, capacities at various load centers and overall measurements. (Request Item No. C-36)

Cationic Softener

Arnold, Hoffman & Co. is offering a new technical bulletin (No. 134) describing Ahcovel X57, a novel cationic softener. Termed by the makers a truly universal textile softener, Ahcovel X57 is said to perform effectively on cotton, viscose and acetate rayons, nylon, Orlon, Dacron, Darlan, etc., and to be of considerable merit in both pure and resin finishes. The bulletin lists a wide variety of highly desirable characteristics attributed to Ahcovel X57, including



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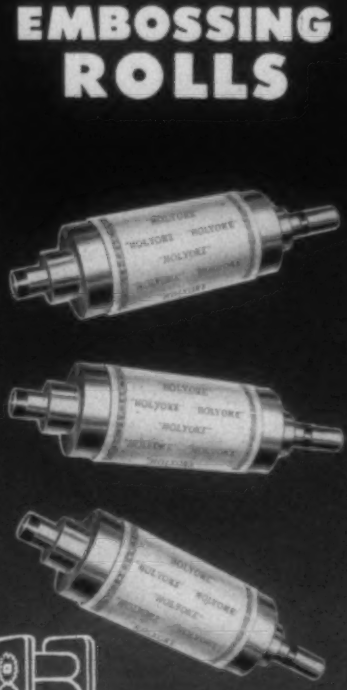

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the fact that—whether used alone or as a plasticizer for resin finishes—it does not contribute to chlorine retention damage. Properties of Ahcovel X57, a pourable paste, and Ahcovel X57 Conc., a soft wax, are detailed as to color, pH and density. Application characteristics and procedures for both forms of the new softener are summarized under the headings of dilution, compatibilities, stability, quantities necessary for application, use with optical bleaches, and performance. Under general description, it is noted that the Ahcovel X57 series show anti-static properties on the hydrophobic fibers, and are unique in their ability to confer anti-static properties to Darlan by substantive means.
(Request Item No. C-37)

General Electric Catalog

The General Electric Co. is offering a 72-page catalog covering its heaters and heating devices. Included in the catalog is a 16-page power requirements section showing short and long form calculations for heating applications. Designated bulletin GEC-1005H, the publication includes data, specifications and operating information on the entire GE line of heaters and heating devices. (Request Item No. C-38)

Lubrol WX Bulletin

Lubrol WX, a nonionic surface-active agent, is detailed in a new technical bulletin released by Arnold, Hoffman. Lubrol WX dissolves in water and produces clear solutions which are stable to acids, alkalis, salts and hard water. Emulsions of oleic acid formed with Lubrol WX, it is said, may be diluted to any desired degree without fear of breaking and, though very dilute emulsions may cream, they are readily redispersed on stirring. The bulletin notes that Lubrol WX is particularly suitable for preparation of emulsions of red oil and of oleic acid-mineral oil mixtures, as used for the oiling of wool for spinning. Application of an oleic acid emulsion prepared using Lubrol WX is described as extremely effective in removing graphite stains from fabrics prior to final processing. A method of aftertreatment of Dacron for static resistance is described, in which the fiber is treated by immersion or other suitable impregnation methods with a room temperature solution of Lubrol WX and dried without rinsing. Copies of the new bulletin—AHCO Technical Bulletin No. 133—are available on request. (Request Item No. C-39)

One-Shot Lubricators

A 2-page, 2-color service instruction sheet describing the design and operation of semi-automatic spring discharge piston pump lubricators is now offered by Bijur Lubricating Corp. Designated Type L, this one-shot lubricating system is operated by pulling up a button or pressing down a lever to full stroke. The cylinder automatically fills with a pre-determined volume of oil, which spring pressure discharges into the distribution system. These Bijur lubricators have wide application on machinery where closely controlled but infrequent oil feed meets operating requirements. Sections of the service sheet discuss operation of the lubricators, maintenance, starting a new machine and servicing. Large photographs show 4 main types of one-shot lubricators and 16 smaller photos of different Bijur meter-units are included. Four tables give specification details of hose fittings, tubing, junction and compression fittings used in Bijur lubrication systems. (Request Item No. C-40)

Shipment Addressing

Weber Marking Systems, a division of Weber Addressing Machine Co., is offering a 16-page booklet entitled *How To Streamline Your Shipment Addressing For Speed And Economy*. Seven different systems for addressing labels, tags and cartons are described and illustrated. The booklet also features a flow chart showing how integrated shipment addressing works, and a "quiz" for determining the efficiency of existing shipment addressing operations.
(Request Item No. C-41)

Fabric Defects

J. B. Goldberg, consultant to the textile industry, has announced a third printing of his book *Fabric Defects*. This book, which describes case histories of imperfections in woven cotton and rayon fabrics, has been out of print for the past year and is again being made available. The original publication price of $6.00 is being retained and copies may be ordered directly from the author at 11 W. 42nd St., New York 36, N. Y.

Cotton Linter Consumption

An all-time record total of 2.2 million bales of cotton linters were consumed in the U. S. during the crop year ending July 31, 1956, the National Cotton Council reports. In a just-released report, the council reveals the chemical industry was the biggest linters user, consuming about 1.4 million bales. Rayon and acetate consumed almost 600,000 bales and were the largest outlets in this field.

In felting and other non-chemical uses, consumption amounted to more than 800,000 bales in the 1955-56 period, the council says. Mattress felts were the largest outlet for linters with consumption estimated at more than 400,000 bales. Automotive padding and furniture padding consumed 200,000 bales and 94,000 bales, respectively. Other non-chemical uses took 115,000 bales.

The council report is based on published figures of the Bureau of the Census and personal interviews with bleachers, commercial felters, consumers, research laboratories, linters dealers, trade associations and other segments of the linters trade. Statistical data is reported in both 500-lb. bales and in running bales. Copies of the 1956 edition of *Cotton Linters* may be obtained free of charge by writing the National Cotton Council, Market Research Section, P. O. Box 9905, Memphis 12, Tenn.

Serving The Textile Industry

Diamond Alkali Plans New Plant In Texas

Diamond Alkali Co., Cleveland, Ohio, a leading producer of both organic and inorganic chemicals, has announced plans for constructing a new plant to produce 50 million lbs. of vinyl chloride monomer annually. In making the announcement, A. L. Geisinger, vice-president and general manager of the Plastics Division, said that the new facility will be located at Diamond's Deer Park Plant at Houston, Tex. Scheduled for completion early next year, the new plant is being built to meet the rapidly increasing demand for Diamond PVC resins.

American Rieter Co. Opens Greenville, S. C., Office

American Rieter Co. of West Caldwell, N. J., the American subsidiary of Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, has opened a service office in Greenville, S. C. The office is located at 508 Rutherford St. and is headed by Hans Klaeui.

Metro Dyestuff Corp. Now Hoechst Chemical Corp.

Metro Dyestuff Corp., West Warwick, R. I., has changed its name to Hoechst Chemical Corp. to indicate its affiliation with Farbwerke Hoechst AG of Frankfurt-Hoechst, West Germany. Beginning May 1, Carbic Color & Chemical Co. Inc., New York, will be sole selling agent for the soluble vat dyes, stabilized azoics, dyes and other specialties manufactured by Hoechst Chemical.

Draper Has Shuttleless Loom On Mill Trial

In an annual report to stockholders, Thomas H. West, president of the Draper Corp., reveals that the company believes it may soon be in a position to market the shuttleless loom on which it has worked for more than a decade. "Early this year," Mr. West reported, "the first production unit of these looms was delivered to a mill where they are currently being started up. In the next few months it should be possible to determine through operation of these looms under mill conditions whether or not they are ready for the market and some indication of the sectors of the market in which they should be most effective."

The report also pointed out that one of the most promising current developments for conventional looms is the Draper automatic filling magazine which was introduced at the Southern Textile Exposition in Greenville, S. C., last October. This device, now undergoing extensive mill trials, is a labor-saving mechanism designed to eliminate the work now required to fill loom batteries by hand.

Production Under Way At New American Enka Rayon Plant

The new multi-million dollar rayon staple fiber plant of American Enka Corp. began operations at Lowland, Tenn., Feb. 18 when the first commercial production line was spun-in. Capacity of the new plant will be more than 50 million lbs. of staple fiber annually. Experimental spinning has been in process since the latter part of December. Commercial production will be increased by stages until this Summer, when the plant is scheduled for full operation.

J. E. Bassill, president of the company, said that American Enka's entry into the rayon staple field opens an important new source of domestic supply for the fiber, and has broadened the company's base for increased service to the textile industry. The fiber will be produced for apparel, home furnishings, carpets, industrial fabrics and other end uses.

The new plant was begun in 1955 and incorporates the latest in modern engineering and design. It comprises 8 connecting structures with a frontage of almost 1,200' and containing more than 7 acres of floor space for process purposes. Extensive quality control facilities also have been installed so that various yarns can be manufactured experimentally from staple fibers in a manner similar to the process used by customers. Direct sales of the new rayon staple will be handled through American Enka's district sales offices in New York, Providence, R. I., Chattanooga, Tenn., and Greensboro, N. C.

Du Pont Plans To Build New Cellophane Plant

The Du Pont Co. plans to build a new cellophane plant near Tecumseh, Kan., 8 miles east of Topeka. The plans call for a plant able to produce 50 millions lbs. of cellophane a year. The plant, on a 600-acre plot, is to be operated by the company's film department and is expected to go into operation early in 1959. Du Pont has more than doubled its cellophane manufacturing capacity during the postwar period, and only last October announced an expansion

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program designed to bring in an additional 30 million lbs. annually from existing plants.

American Enka Changes Quarters In New York

American Enka Corp. has moved into new, enlarged offices at 530 Fifth Ave., New York City. The new, modern 27-story building into which American Enka is moving its New York offices is located on the site of one of New York's famous landmarks, The Fifth Avenue Bank which was merged with the Bank of New York. The new structure will be known as the Bank of New York Building. Furnishings of the new Enka offices will be contemporary in design. Most of the fabrics in draperies and upholstering throughout the office are made of Enka products.

Continental-Diamond Fibre Division Changes Its Name

A change in the official name of the Continental-Diamond Fibre Division of The Budd Co. Inc. has been announced. The new corporate name is Continental-Diamond Fibre Corp. This name change does not affect in any way the relationship of Continental-Diamond Fibre with The Budd Co. and it remains a wholly-owned subsidiary of that firm. Employees of the Continental-Diamond Fibre Corp. are also unaffected by the name change.

Acquired as a wholly-owned subsidiary of The Budd Co. in July 1955, the Continental-Diamond Fibre Corp. has engaged in a substantial expansion and modernization program over the past 18 months. Spearheaded by a capital expenditure of over $3,750,000, the firm has established a long range improvement program designed to make it the leader in its industry. Plants of the Continental-Diamond Fibre Corp. are located at Newark, Del.; Bridgeport, Penn.; Valparaiso, Ind.; Spartanburg, S. C.; and Toronto, Canada.

Arnold, Hoffman To Produce Procion Dyes In New Plant

In response to demand for Procion dyes, Arnold, Hoffman & Co. Inc. has announced plans to set up a plant for their manufacture at the site of the Arnold, Hoffman multi-products plant at Dighton, Mass. While details of capacity, etc., are now in the blueprint stage, management expects that the new plant will begin to take physical shape in May, and will go into active production early in the Autumn.

The Procion dyes were developed by Imperial Chemical Industries Ltd. Their introduction is said by Arnold, Hoffman to climax more than half a century of dyestuffs research to find a means whereby simple dyes with low physical affinity for cellulosic fibers could be synthesized—and then could be induced to react with the fiber to produce a very high degree of wet fastness. Arnold, Hoffman presently distributes Procions and will maintain supplies from I.C.I. until the new Dighton plant is in full operation.

Plant Expansion Announced By Proctor & Schwartz

Proctor & Schwartz Inc., Philadelphia, Pa., has announced plans to expand its manufacturing facilities by establishing an additional plant at Waynesville, N. C. The new plant will occupy between 50,000 and 75,000 sq. ft. on a 27½-acre site along the Southern Railway tracks between Waynesville and Lake Junaluska. The Waynesville operation will be started on a small scale, employing local people, and manufacturing initially textile fiber processing machinery. Later the company plans to advance into the manufacture of drying equipment. The company does not have the space to expand further at the present location, but it is not moving out of Philadelphia.

Yale Trucks Get UL-GS Approval

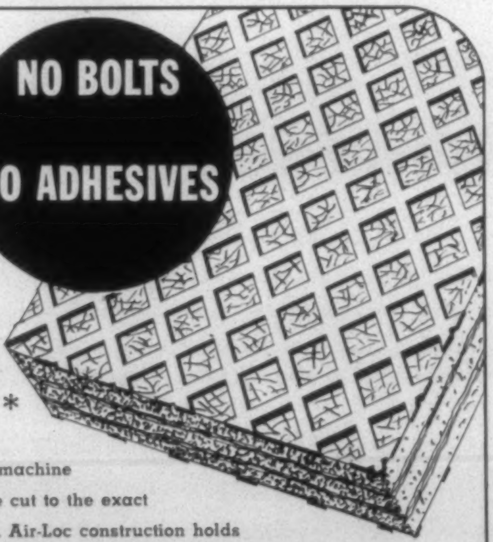
The Yale Materials Handling Division of The Yale & Towne Mfg. Co., the developer of the first gasoline-powered lift trucks to meet Underwriters' Laboratories requirements for type GS approval, has announced the acquisition of this approval on its entire line of gasoline engine trucks. The latest UL-GS approval was granted on the Yale G-52 line of 2,000, 3,000 and 4,000-lb. capacity trucks. The approval covers both pneumatic tire and cushion tire trucks manufactured by Yale. According to specifications and recommendations prescribed by the National Fire Protective Association, GS trucks are the only gasoline trucks which can be safely used in locations defined as hazardous because of the presence of combustible fibers.

Patent On Textured Yarn Process Granted Du Pont

The Du Pont Co. has been granted U. S. Patent No. 2,783,609 covering textured yarns. The broad claims of the patent encompass a wide range of bulky yarns with characteristics resulting from random loops in the individual filaments or fibers regardless of the method by which the loops have been introduced.

The yarn texturing process, which reportedly can be applied in some degree to almost any type of yarn to yield products described by Du Pont as "distinctly different from either spun or filament yarns," is already said to be drawing widespread interest, with some 50 yarn processors in the U. S. and abroad licensed to use it. Many of these licensees have also been licensed to use Du Pont's trademark, Taslan, which designates textured yarns meeting quality standards established by Du Pont. Over 3 million lbs. of fiber have been processed to date.

The outstanding characteristic of Taslan textured yarns is said to be that while they



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differ from both continuous filament and spun yarns, they combine some of the more desirable properties of both—strength and uniformity comparable to filament yarns and bulk and handle resembling spun yarns.

The process can be accomplished on modified twisting equipment or on specially designed units. Two major textile machinery manufacturers are now supplying this equipment, Du Pont reports. The heart of the process is an air jet by which yarn is introduced through a needle into a compressed air stream in a venturi tube. Controlled changes in 5 process elements—air pressure, speed, twist, overfeed and number of filaments—allow virtually limitless variation in hand, covering power and appearance. Chemical properties and such physical properties as stress-strain characteristics normally remain unchanged, however.

Becco Research Laboratory Completes 10,000th Report

Early this month, a 2-page typewritten report, accompanied by 3 hand lettered charts on graph paper, slipped quietly into the permanent file of the research laboratory of Becco Chemical Division, Food Machinery and Chemical Corp., Buffalo, N. Y. Its title: "Investigation of Breaks in Bleached Cotton Threads." Its serial number, however, gave this report an added significance that set it a little apart from the last preceding one. The number: 10,000, an impressive milestone in the firm's history.

From the company's very beginning in 1925—it was Buffalo Electro-Chemical Co. in those days—a continuing program of research and development has probed into the mysteries of industrial processes that used or could use the hydrogen peroxide and other peroxygen chemicals that Becco makes. The common goal of these investigations was a better, more economical process for Becco's customers. Initially, the research concentrated on the application of hydrogen peroxide to textile bleaching and to pulp and paper brightening. As Becco's product-line grew, its field of investigation widened. The size of its research staff has steadily increased, too—from the original 1 to more than 60 today.

The findings of these researchers were recorded, in the usual way, as "Laboratory Reports." Some of these reports were deemed of broad enough usefulness to be published; first as articles in the technical journals and trade press, later as *Becco Bulletins*. Others were destined to be seen by no more than a dozen pairs of eyes. The titles of these reports—spanning more than a quarter-century of industrial growth in this country—indicate the breadth of interest of Becco's researchers. An early report, for example, was No. 127, entitled: "The Bleaching of Bag Material." In 1938, Report No. 602 covered a research project devoted to finding out: "The Fastness of Vat Dyes to H_2O_2." In 1945, another report disclosed, for the first time, the successful development, on a commercial scale, of 90% hydrogen peroxide. Any day now, Reports No. 10,001 and 10,002 will come along. But until No. 100,000 arrives, the laboratory staff at Becco will always feel a little extra proud of Report No. 10,000.

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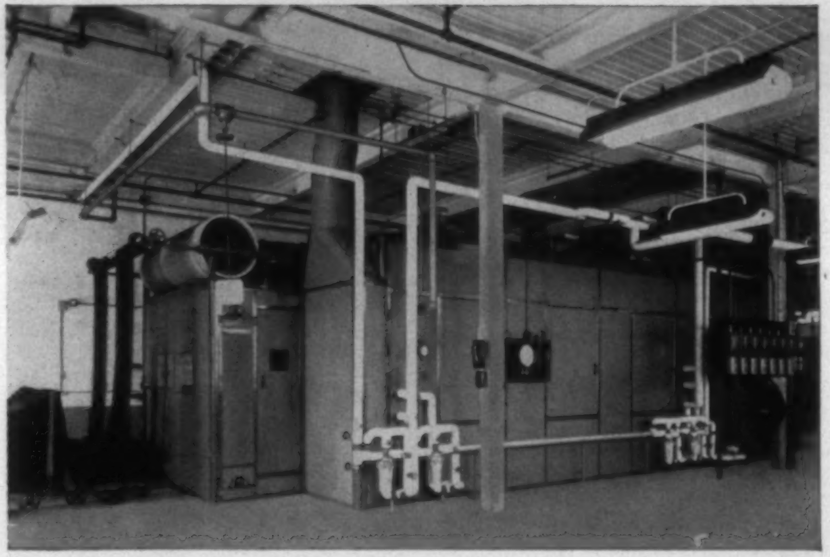

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Philadelphia 20, Pa.
Manufacturers of Textile Machinery & Industrial Drying Equipment

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textile bulletin

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TEXTILE BULLETIN is devoted to the dissemination of information and the exchange of opinion relative to the spinning and weaving phases of the textile industry, as well as the dyeing and finishing of yarns and woven fabrics. Appropriate material, technical and otherwise, is solicited and paid for at regular rates. Opinions expressed by contributors are theirs and not necessarily those of the editors and publishers. ¶ Circulation rates are: one year payable in advance, $1.50; two years payable in advance, $2.00; one year, Canada, $3.00; one year, other countries in Postal Union, $5.00; single copies, 25 cents. ¶ A companion monthly journal, THE KNITTER, is published by Clark Publishing Co. and devoted to the interests of the knitgoods manufacturing industry.

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Editorial Changes

James McAden Jr. has resigned his position as editor of Textile Bulletin to accept a position as director of public relations for the South Carolina State Chamber of Commerce, with headquarters in Columbia, S. C.

Jack Kissiah, who has been associate editor of this journal for the past four years, succeeds Mr. McAden as editor, and with his broad journalistic experience and familiarity with the industry, is well qualified for this assignment. Mr. Kissiah has also been named secretary-treasurer of the Southern Textile Association, succeeding Mr. McAden in that post. He formerly was assistant secretary-treasurer of the association, having been named to the position in 1954.

Succeeding Mr. Kissiah as associate editor is a newcomer to the Textile Bulletin staff—Gus Guggenheim. Mr. Guggenheim is a textile engineering graduate of the Alabama Polytechnic Institute at Auburn. He has widely varied experience in textile manufacturing processes and quality control. His former associations have been in both supervisory capacities and engineering work with the Eagle & Phenix Division of Reeves Bros. Inc., Columbus, Ga.; Avondale Mills, Sylacauga, Ala.; and Buck Creek Cotton Mills, Siluria, Ala. For the past year he has been manager of the non-woven division of Buck Creek Cotton Mills.

A second addition has also been made to the staff with the appointment of Thomas D. Efland as technical editor. Mr. Efland, a graduate of the North Carolina State College School of Textiles, is associate professor of weaving and designing at the School of Textiles, Clemson College, Clemson, S. C. Mr. Efland will serve in an advisory capacity and will contribute helpful articles on various phases of spinning and weaving from time to time.

Continuing also as an associate editor is Andrew Hewitt, a member of the editorial staff since 1943.

Textile Bulletin is the only journal in the United States that is edited exclusively for the managers and operating personnel of plants that spin, weave, dye and/or finish yarns and woven fabrics. With an enlarged editorial staff, it is now better equipped than ever to serve the industry.

Junius Smith
General Manager
Clark Publishing Co.

Congress and O.T.C. Again

The Eisenhower Administration's avowed intention to press Congress for approval of this nation's adherence to the Organization for Trade Co-operation (O.T.C.) foreshadows another bitter legislative contest. It's the same legislation that finally won the approval of the House Ways and Means Committee in the last Congress, but on a split vote. Why it never got to the House floor for debate is explained by the reluctance of the committee chairman, Rep. Jere Cooper (D-Tenn.) to submit the issue until he had assurance of suffcient Republican strength.

The textile industry, of course, as well as certain other basic industries, has a vital interest in the O.T.C. fight. Most segments of the textile industry strenuously fought the O.T.C. proposal last year, with J. Spencer Love and Roger Milliken carrying sharp protests before the Ways and Means Committee. Actually, a great deal more is involved in the matter of U. S. adherence to the O.T.C. than would appear on the surface or than would appear to be indicated in the O.T.C. bill itself.

O.T.C. is the proposed administrative arm for the General Agreement on Tariffs and Trade (G.A.T.T.), the means through which the U. S. and 34 other nations negotiate tariff reductions. G.A.T.T. itself has never been approved by Congress and observers view the O.T.C. proposal as a move by which indirect approval would be obtained. If Congress does not approve O.T.C. the whole project will be scrapped. This is because member nations representing not less than 85 per cent of the total trade

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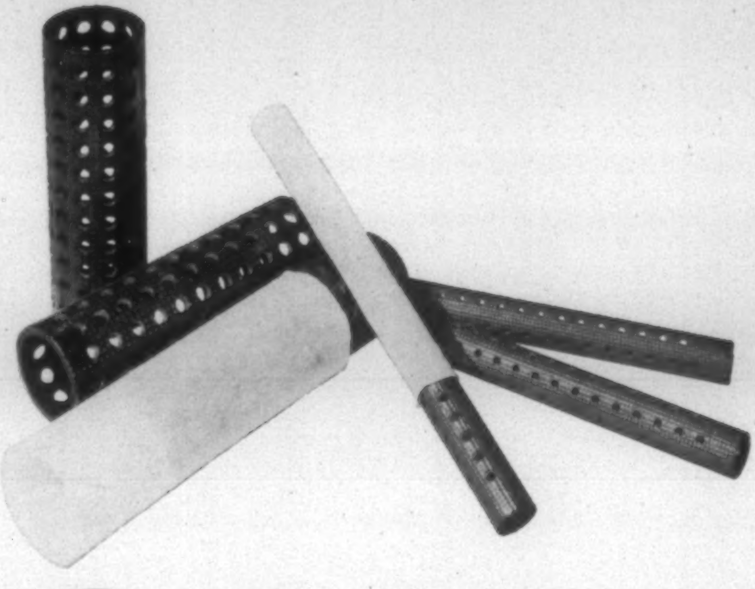

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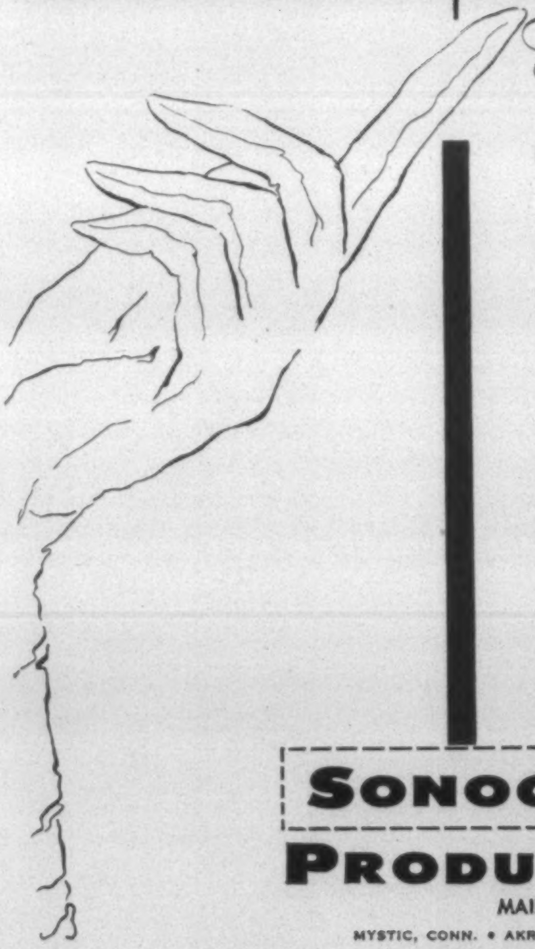

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among all the adhering countries must give their formal assent before O.T.C. can become operative, and inasmuch as U. S. trade comprises more than 20 per cent of the total, this nation's adherence is absolutely necessary.

The O.T.C., it will be recalled, was created by the member nations of G.A.T.T. Through G.A.T.T., Mr. Eisenhower, like Mr. Truman before him, has implemented the tariff policy of his administration. Because G.A.T.T. never has been approved by Congress, all trade and tariff agreements which our government has made with the governments of other G.A.T.T. member nations have been based on the President's authority established in the Reciprocal Trade Agreements Act.

G.A.T.T., from its beginning in 1947, has been a loose, informal international grouping of nations bent on negotiating tariff schedules with each other in a common purpose. O.T.C., on the other hand, is designed to be not only a formal but permanent agency to promote the original and basic G.A.T.T. purpose.

Thus any fight over O.T.C. is certain to broaden out into a fight over the entire trade agreements program. The American Tariff League, a major leader of the anti-O.T.C. drive in 1955, recently adopted a resolution calling for the abandonment of the 22-year-old reciprocal trade agreements plan.

When it comes to the battle over O.T.C., it's not merely an issue of importer vs. U. S. manufacturer. Important business and industrial interests are arrayed on each side. Among the companies which sent representatives to support the bill before the Ways and Means Committee last year were Standard Oil Co. of New Jersey, American Metal Co., Crown Zellerbach Corp., the Gillette Co., and Anderson-Clayton & Co. The three big farm groups—the American Farm Bureau Federation, the National Grange, and the National Farmers Union—also backed the legislation.

Currently anti-trust sentiment would appear to be somewhat on the upswing, although developments abroad could easily reverse the trend. For instance, the election platforms of both parties contained pledges to safeguard more carefully the rights of U. S. manufacturers who have been hurt by imports of competitive goods. And some Congressmen have been aroused by the President's rejection over the past few months of several Tariff Commission recommendations to higher tariffs.

TEXTILE INDUSTRY SCHEDULE

— 1957 —

Mar. 28-29 (Th-F)—**TEXTILE QUALITY CONTROL ASSN.**, Clemson House, Clemson, S. C.

Mar. 30 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Roanoke Hotel, Roanoke, Va.

Apr. 1-2 (M-Tu)—**SOUTHERN MUNICIPAL AND INDUSTRIAL WASTE CONFERENCE**, Student Union Building, N. C. State College, Raleigh.

Apr. 4-6 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Palm Beach Biltmore Hotel, Palm Beach, Fla.

†Apr. 6 (Sa)—**EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Auditorium, N. C. State College School of Textiles, Raleigh.

Apr. 9-11 (Tu-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), International Amphitheatre, Chicago, Ill.

Apr. 10-12 (Th-Sa)—Annual meeting, **ALABAMA COTTON MFRS. ASSN.**, Buena Vista Hotel, Biloxi, Miss.

Apr. 13 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Lindale, Ga.

†Apr. 13 (Sa)—**NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION** (Dan River Mills as host), Danville, Va.

Apr. 24-25 (W-Th)—Open House, **A.C.M.I.** Cotton Fiber Testing Laboratory, The Clemson House, Clemson, S. C.

†Apr. 26 (F)—**SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION** (Greenwood Mills as host), Harris School, Greenwood, S. C.

Apr. 27 (Sa)—Spring meeting, **TEXTILE OPERATING EXECUTIVES OF GEORGIA**, Hightower Building, Georgia Institute of Technology, Atlanta.

Apr. 29-May 3 (M-F)—**MATERIALS HANDLING EXPOSITION** (concurrent with conference of American Material Handling Society), Convention Hall, Philadelphia, Pa.

May 1-2 (W-Th)—Spring meeting, **THE FIBER SOCIETY**, Clemson House, Clemson, S. C.

May 1-4 (W-Sa)—Annual convention, **COTTON MFRS. ASSN. OF GEORGIA**, Emerald Beach Hotel, Nassau, Bahamas.

May 9-11 (Th-Sa)—**NORTH CAROLINA INDUSTRIAL SAFETY CONFERENCE**, Robert E. Lee Hotel, Winston-Salem, N. C.

†May 11 (Sa)—**PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION**, Catawba Country Club, Hickory, N. C.

May 16-18 (Th-Sa)—Outing, **CAROLINA YARN ASSN.**, The Carolina, Pinehurst, N. C.

May 20-25 (M-Sa)—**NATIONAL COTTON WEEK** (sponsored by National Cotton Council of America).

May 28-29 (Tu-W)—Industry-wide market research conference (sponsored by National Cotton Council of America), Washington, D. C.

May 30-June 1 (Th-Sa)—Annual meeting, **SOUTH CAROLINA TEXTILE MFRS. ASSN.**, The Cloister, Sea Island, Ga.

June 6-8 (Th-Sa)—Annual outing, **SOUTHEASTERN SEC., A.A.T.C.C.**, Radium Springs, Ga.

June 7-9 (F-Su)—Annual outing, **PIEDMONT SEC., A.A.T.C.C.**, Mayview Manor, Blowing Rock, N. C.

June 20-22 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, Ocean Forest Hotel, Myrtle Beach, S. C.

Sept. 4-6 (W-F)—Fall meeting, **THE FIBER SOCIETY** (joint meeting with British Textile Institute), Statler Hotel, Boston, Mass.

Sept. 12-13 (Th-F)—Annual meeting, **CARDED YARN ASSN.**, The Cloister, Sea Island, Ga.

Sept. 14 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Columbus, Ga.

Sept. 27-28 (F-Sa)—**COMBED YARN SPINNERS ASSN.**, The Cloister, Sea Island, Ga.

Sept. 28 (Sa)—**PIEDMONT SEC., A.A.T.C.C.**, Hotel Barringer, Charlotte, N. C.

Oct. 2-3 (W-Th)—**CHEMICAL FINISHING CONFERENCE** (sponsored by National Cotton Council), Hotel Statler, Washington, D. C.

Nov. 14-16 (Th-Sa)—National convention, **AMERICAN ASSN. of TEXTILE CHEMISTS & COLORISTS**, Hotel Statler, Boston, Mass.

Dec. 7 (Sa)—**SOUTHEASTERN SEC., A.A.T.C.C.**, Atlanta, Ga.

— 1958 —

Jan. 27-28 (M-Tu)—Annual meeting, **NATIONAL COTTON COUNCIL OF AMERICA**, Phoenix, Ariz.

Apr. 10-12 (Th-Sa)—Annual convention, **AMERICAN COTTON MFRS. INSTITUTE**, Hollywood Beach Hotel, Hollywood, Fla.

May 26-29 (M-Th)—**NATIONAL PACKAGING CONFERENCE AND EXPOSITION** (sponsored by American Management Assn.), New York Coliseum, New York City.

June 19-21 (Th-Sa)—Annual convention, **SOUTHERN TEXTILE ASSN.**, The Grove Park, Asheville, N. C.

Oct. 6-10 (M-F)—**SOUTHERN TEXTILE EXPOSITION**, Textile Hall, Greenville, S. C.

‡Fall—National convention, **AMERICAN ASSN. OF TEXTILE CHEMISTS & COLORISTS**, Conrad Hilton Hotel, Chicago, Ill.

(M) Monday; (Tu) Tuesday; (W) Wednesday; (Th) Thursday; (F) Friday; (Sa) Saturday; (Su) Sunday

****Listed for the first time this month.*** ***‡Tentative listing.*** ***†Changed or corrected from previous issue.***

Basically, as noted earlier, the real issue in the O.T.C. legislation is whether the U. S. should continue to lower barriers to import trade in concert with other Western nations, or whether the U. S. has already gone far enough in opening up the country to the sales efforts of foreign producers.

Congressional disapproval would probably mean the doom of the whole O.T.C. project, for it seems highly unlikely that the other G.A.T.T. members would go ahead with the plan without American participation. So far, only one country has approved it, and that endorsement was made conditional upon U. S. acceptance.

The fate of O.T.C. obviously will weigh heavily on the Administration's plans in drawing up its 1958 campaign for a legislative trade program. The authorizing legislation for trade and tariff agreements expires June 30, 1958, and whether a simple extension of the law is to be requested or whether basic new law is to be sought is something that of necessity must be mapped out by the Administration strategists as far as possible in advance.

Indiana Joins The States With Right-To-Work Laws

More and more the laws having the effect of barring the "union shop," or going a little beyond the ban on the "closed shop" that Congress imposed for the nation as a whole when it enacted the Taft-Hartley Act in 1947, are becoming a major issue from one end of the country to the other. These laws which have in recent years been put on the law books of the various states are causing more concern among the unions than any type of legislation existing or proposed.

The labor unions are geared for an all-out campaign to repeal the right-to-work laws in the states where they exist and they are also ready to spend considerable sums of money to keep such laws from spreading to other states. Their latest major failure is in Indiana, which is the eighteenth state to get a right-to-work law. The issue is still to be decided in several other states, and in all likelihood this year.

Mainly the states having right-to-work laws are in the South and the Middle West. The highly industrialized areas of the East are significantly without such laws at the present time. A solid bloc of Southern states stretching all the way from Virginia through Texas was broken last year when the unions succeeded in getting Louisiana's legislature to repeal its law. Still the stronghold of the right-to-work laws is the South and there is still the possibility, of course, that the pendulum can swing again soon in Louisiana.

What the unions want and seek, naturally, is repeal of the provision in the Taft-Hartley Act which authorizes these state laws. But they do not see an easy way of getting such an amendment by Congress and hence the real fight, it appears, is to be decided in the individual states, and there would seem to be no prospect of an early determination of the ultimate issue. It can be safely presumed, however, that the fight will become intensified over the next several years, and most certainly until another presidential election year rolls around. For the opponents of the "union shop" are not inactive by any means and they have formed

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committees in various states to work for adoption of right-to-work laws or to fight union attempts to get the laws repealed.

The states which have laws banning the union shop are Alabama, Arizona, Arkansas, Florida, Georgia, Iowa, Mississippi, Nebraska, Nevada, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas, Utah and Virginia—and now Indiana, where the issue has been the subject of bitter political controversy for many years. After the Indiana legislature enacted the right-to-work law in February, Gov. Harold W. Handley resisted unprecedented union pressures, refused to veto the legislation and announced firmly he would neither sign nor veto the law, and thus let it become effective automatically without his signature.

Summoned by the leaders of the Indiana Federation of Labor, a crowd of some 10,000 union members jammed the Indiana state capitol on March 2 to protest passage of the right-to-work law. But they were unable to make 48-year-old Governor Handley, a Republican in his first term, change his mind. More than half of the thousands of union demonstrators at the state capitol carried placards denouncing the bill and calling on the governor to veto it. The Indiana bill originated in the lower House which passed it by a vote of 52 to 44. The Senate approved it a few days later, 27 to 23. The voting mainly followed party lines. However, the wounding on Feb. 13 of an infant in Princeton, Ind., was generally regarded as having turned several legislators' votes in favor of the measure. The baby girl was a victim of gunfire in a labor dispute.

The Taft-Hartley Act outlawed the "closed shop" contract, which forces employers to hire only union members, but Congress consented to the unions having a milder form of contract, the "union shop." Under the latter, a non-union worker can get a job but must join the union and pay dues regularly in order to keep his job. The Taft-Hartley Act, however, permits the states to adopt their own laws prohibiting the "union shop" as well as the "closed shop."

These laws specify that workers shall not be denied employment because of membership or non-membership in a labor union. The fact that just about all the Southern states—the lone exception being Louisiana, which has switched back and forth a couple of times, and may indeed switch again—have these right-to-work laws is evidence that they recognize compulsory unionism in any form to be indistinguishable from slavery and the denial of a right inherent to a free man in a free nation.

Chemical Advances Affect Each Segment of Industry

The chemical revolution, in agriculture as well as in textiles, is generally regarded as being in its infancy. In cotton particularly, at every level from the seed to the finished fabric, the chemists continue to do some fabulous things to a fabulous commodity. For instance, changes in the physical properties of cotton fibers, brought about by chemical modification, have become increasingly important, and much research on the modification of cotton to produce new and better textile fibers is carried on by the Southern Utilization Branch of the U. S. Department of Agriculture at New Orleans.

The last half century has seen the farmer make two pounds of food and clothing grow where only one grew before, and at only half the human effort formerly required. First there was the biological revolution, then the mechanical revolution and, more recently, the chemical revolution and together they contribute toward improvements in the efficiency of a $35 billion farm industry. Roughly, the chemical revolution in agriculture dates from about 1940, sparked by the pressures on a war-mobilized agricultural industry.

Chemical spraying of cotton against the boll weevil and other insects has greatly helped reduce the annual losses on this crop which amounted to a billion dollars a few years ago. Yet it is estimated that insects destroy the equivalent of one out of every seven acres of cotton. Advances in insect control constitute merely one front along the broad objective of aiding the U. S. cotton producer reach a point where he can grow cotton profitably at a price that is more competitive with the synthetic fibers and the world price of cotton.

Now there appears very definite indication that the cotton industry is on the threshold of a new era in insect control which eventually may give cotton protection against insects from seeding to harvest without the great involvement of time and labor now required even to attempt this. The day of the systemic insecticide for cotton is not something on the horizon or still in the laboratory stage, but it's already here and as the new crop is planted, seed treated with the first successful systemic insecticide, Thimet, will be available throughout the belt from the Carolinas to California.

Progress with systemics necessarily has had to be slow, but the promise is great, the agricultural scientists say. Thimet is an organic phosphate systemic which is absorbed into the cotton seed, "grows up" with the plant and kills pests that attempt to eat the plant or suck its juice. Moving in the sap stream of a plant, a systemic poses very little danger to beneficial insects which live mainly on other insects. And, applied as a seed treatment, a systemic isn't affected by weather conditions that interfere with conventional spray and dust applications.

Now the frontier of cotton systemic insecticide research has very definitely been rolled back. First given the code number 3911, the new chemical, first compounded a few years ago in the research laboratories of American Cyanamid Co., was tested at state and Federal research stations throughout the Cotton Belt during the 1955 season. Applied as a seed treatment, Thimet gave six to eight weeks control of insects on cotton seedings without application of a single spray or dust. More than one county agent labelled it the most outstanding advent of its kind on the cotton scene in 30 years.

The U.S.D.A. recommended grower trials last Spring and accordingly Cyanamid released the insecticide for limited use by cotton growers in a few areas of the belt under the trademarked name of Thimet. The commercial trials last year were conducted in parts of Mississippi, Texas and New Mexico. As the result of these grower trials it was decided to make Thimet-treated seed available throughout the belt this year through selected seed processors. Thimet is applied to cotton seed only by processors with special equipment. Growers may bring their own seed to the plants for treatment. The U.S.D.A. recommended custom treatment as the best method of mixing and distributing the systemic insecticide.

The U.S.D.A. reports that data accumulated from last year's grower trials indicated "striking results in aphid control" and went on to say: "An unusually heavy early season infestation of these pests in Texas cotton producing areas provided excellent test conditions. In ten large-scale experiments in which treated seed approximated one pound per acre, the treated cotton plants averaged only 0.3 aphids per square inch of leaf surface six weeks after planting, compared to 14 aphids per square inch on untreated plants —a ratio of one to 47. Control continued for several weeks longer where infestation persisted." It noted that treated plants in the most heavily infested field were almost twice as tall as untreated plants two months after planting.

By 12 weeks after planting, the treated cotton plants averaged 19 forms—that is, squares, blooms or bolls—per foot, against an average of nine per foot on the untreated plants. And at the same time treated plants averaged 6,000 blooms per acre, compared to 1,600 blooms per acre for untreated plants. And, furthermore, the yield measurement showed that the treated plants produced 39 per cent more cotton than the untreated.

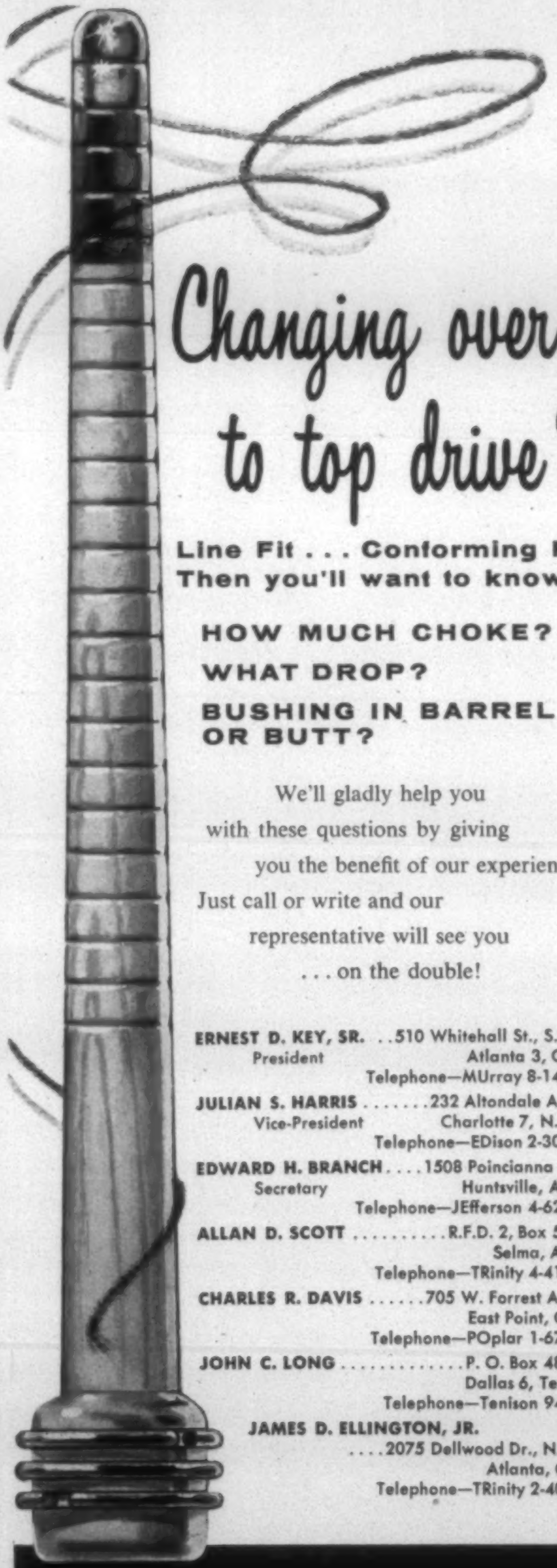
Aphids, of course, are not the only pest against which the revolutionary insecticide is effective. It is effective also against thrips and spider mites. And further than this, results of experiments show exceptional promise for the control of serpentine leaf miners, cotton flea hoppers, flea beetles, cutworms, false wireworm adults and, at this stage, for the partial control of boll weevils.

Thimet replaces the two to four conventional sprays or dusts which growers have ordinarily had to apply to control the early-season insect complex. Meanwhile, of course, Thimet research is far from being a closed chapter and the experiment stations are co-operating in developing methods to extend initial insect immunity from seed treatment by granular applications of Thimet side dressed along plant rows and sprays applied to plant foilage Preliminary research, it is reported, has indicated it may be possible to combat boll weevil and boll worm damage by this method.

Whether it's cotton production or cotton manufacturing, the part chemistry is playing in the advancement of cotton covers nearly everything. Even on the purely agricultural side, one of the things which is of particular interest to the spinner and manufacturer is the advent of the now widely available dual-action chemical for cotton defoliation and regrowth control, 3 AT (amino triazole), since its effect is to reduce trash and green stain to a minimum. The new chemical, besides defoliating the crop, holds back new plant growth from three to five weeks, makes picking easier and contributes to cleaner cotton.

Chemistry, it is true, created the synthetic fibers. But, it can be said also, it is creating a new day for cotton, all the way from the cotton seed itself to the latest creation of the fashion designer. And even so, it would appear, the new day is just dawning.

The earliest hand-operated spinning wheel was developed in India more than 2,000 years ago. A small wheel was attached to the spindle, which was rotated by a band from a larger wheel. In this operation, the yarn was spun a little at a time, then wound on the spindle in alternate operations.



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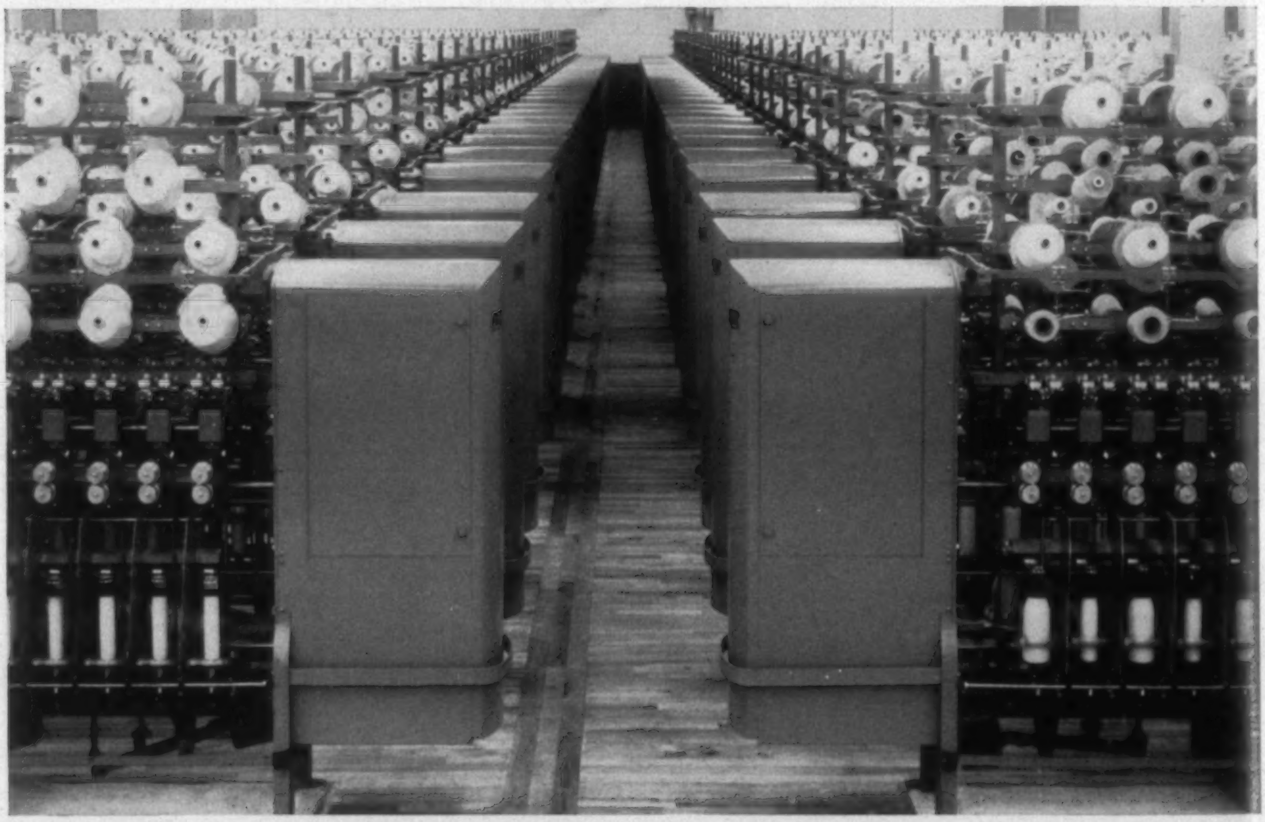

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VOL. 83 MARCH 1957 NO. 3

The Textile Industry Needs Cotton Research

By L. G. HARDMAN JR., President, Harmony Grove Mills Inc., Commerce, Ga.

Is cotton research a luxury or a necessity? The following paper gives some tangible reasons why research and development is anything but a luxury. The author, who is currently first vice-president of the American Cotton Manufacturers Institute, served as general chairman of this year's Cotton Research Clinic at Savannah, Ga. His remarks were made at the Clinic Dinner on Thursday evening, Feb. 28.

DURING the past few years, the textile outlook has been discouraging. Competition from low-wage foreign countries, depressing our prices and threatening our markets, has tended to deter modernization and expansion, research and development. Only within the last month have we seen some promise of at least a partial solution to this problem.

Our mills have been caught in a squeeze of rising costs and highly competitive prices. During my own connection with the industry, wages per hour have gone up 5½ times, the cost of cotton up 3⅓ times, and the cost of supplies, repairs and power up 2½ times. Meanwhile, the price per pound of finished goods has risen only 2¼ times. To remain competitive in this situation, it has been necessary for mills to plough back much of their slim profits in new machinery and equipment.

Then there is the matter of competition from non-textile products. Some of these—like paper, plastics, rubber, glass and metals—compete directly with textile products, replacing conventional yarns and fabrics in many important uses. Other products compete indirectly. but nevertheless seriously with the products of our industry. Every radio, TV set, every new automobile with automatic drive, power steering and push-button windows takes a part of the consumer's dollar. And each year since 1947 the so-called "durable goods" have taken more of that dollar leaving less and less available to pay for the products that we produce.

Perhaps the greatest threat we face today is discouragement itself. It is right that we should recognize our problems, that we should emphasize the need to work together to overcome them. But we also must recognize our opportunities, and in many ways these opportunities may be greater because, by and large, they have been neglected. We must also make sure that others share this knowledge, to justify capital expenditures for textile modernization, to persuade our youth to invest their future in this industry, and to convince management that greater research and development effort will mean new processes, products and profits.

Research may well be the key factor in the future of the textile industry. The striking effect of research on other products and other industries is readily apparent. The paper industry, for example, produces more than a score of products which compete directly with textiles—products such as handkerchiefs, table cloths and napkins, towels, cordage and twine, automobile fabrics and bags. In more than two-thirds of the items in which paper competes directly with cotton, the trend is toward paper. In almost every case, the paper product is competitive only because research has improved its quality and lowered its cost

Plastics, mainly in the form of film or sheeting, compete with textiles in apparel, curtains, drapery and upholstery, and a couple of dozen other important uses. In every case the competitive trend favors plastics. These plastics, as you well know, are wholly the product of research. Prior to World War II their production was practically nil. In 1948, U. S. output of plastic film and sheeting reached 50 million pounds. By 1956, the startling total of plastic film and sheeting was 300 million pounds.

In general in this country, the industries which show the most rapid growth are those which receive the greatest research and development support. The synthetic plastics industry, for example, is doubling its production every four years. The electronics industry is also growing at a four-year doubling rate, and the aluminum industry at a 5⅓-year doubling rate. The older and more basic industries, of course, generally grow more slowly. But even such well-established and seasoned industries as steel, paper, petroleum products and rubber are experiencing 13 to 14-year doubling rates against a 17½-year doubling rate for the whole of our economy.

Consumption Down

In contrast, we all know that domestic textile consumption, 14 years after the wartime peak of 6.9 billion pounds, reached in 1942, has still not regained that level, although many other industries have doubled or quadrupled their wartime highs in the same period. Of course, the textile industry as a whole has expanded since the 1920's, production-wise, but at a much lower rate than the industry average. The last 15 years have been especially disappointing.

Why are textiles lagging behind other products? Could one reason be the difference in research effort? That is, in over-all research, including not only the fiber processing and machinery studies, but also chemical research and the development of new products, and beyond that, those important economic and marketing studies through which our industry might achieve that vital balance between supply and demand which insures profitable operations. Has our industry failed to use all these research tools as effectively as other American industries?

R. H. Ewell of the National Science Foundation, in a paper entitled "The Role of Research in Economic Growth" has published a chart showing the remarkable correlation between the growth rates of various industries and their research and development expenditures as a per cent of sales. Aircraft, electrical machinery, and industrial chemicals industries, which spend most for research, have the highest rate of growth. Food, lumber and textiles, which spend the least for research, show the lowest rate of growth. In the textile industry, less than one-tenth of one per cent of the sales dollar is spent for research. Contrast this with the nine per cent spent by the aircraft industry, six per cent on electrical equipment and nearly three per cent on industrial chemicals

Saturated Market?

If there is such a direct connection between investment in research and the rate of growth of industries, why don't textile manufacturers spend more on research? Recently I was reading a report which stated that more and more we are faced with the problem of rising cost and that spending for research will be essential. Do the manufacturers believe that the market is saturated? Dr. Croxton, technical director of Battelle Memorial Institute, recently described the story of the electric iron, as told by an executive of the General Electric Co. When he started selling irons in 1930 he was sternly warned that the market for irons was 98 per cent saturated. "Today," he comments, "it is still saturated, but it is ten times the business it was in 1930."

This executive might have added that at one time seven or eight years ago it looked as if the electric iron business was in trouble, because of tough competition from the home ironer. But then someone came up with the idea of a steam iron. Now every housewife, who already owns an old heavyweight electric iron, a lightweight iron and home ironer, "has to have" a steam iron also.

Can such parallel be drawn for the textile industry? Does the textile industry hesitate to embrace research wholeheartedly because profits are slim—because business is so competitive it cannot "afford" research? Well, which came first, the chicken or the egg? Nothing makes an industry so competitive, heightens the cost-price squeeze so much as a condition in which every mill can and does make practically the same product. Research is not an expenditure, not a luxury to be afforded only in good times. Research is an investment in the future, a down payment on new processes and new products that can lead to new business, to real expansion and to higher profits. And as an investment, research is one of the best. According to R. H. Ewell the average return on research investment is between 100 and 200 per cent per year, for a 25 year period.

Lack of Confidence?

Is the main trouble a lack of confidence? Is it because management can't see the possibilities? If this is what is holding up technical progress in the textile industry, then it should be the duty of every research man—of every one who shares the conviction that research promises a bright future for our industry—to stimulate confidence in what research can do, to show some of its myriad possibilities. Research men tend to be too conservative, too hesitant to promise results, because they recognize the danger of failures. And failures do occur in all research. But what is wrong in talking about possibilities all of us can see? What is wrong with systematically studying other problems and opportunities to which research may hold the key? What is wrong with recognizing that research has always yielded benefits beyond anything which could be predicted in advance?

All about us we can see things that might be done. We have new fibers, new chemicals, new finishes, new techniques. These are not new products, but rather new tools which our industry should use with intelligence and imagination, recognizing them only as a start to what might really be accomplished.

For cotton the potential for overcoming problems and developing new products is especially promising. Meetings like the Cotton Research Clinic bring together experts to examine and solve many processing problems. In other areas, great strides are being made to cut the cost of cotton production and harvesting through advanced mechanization. Transcending even these impressive developments are the almost unlimited possibilities for producing many entirely new cotton products by chemically treating the yarns and fabrics our mills produce

For those who share the conviction that research plays a vital role in the health and prosperity of industries, the textile industry seems to be approaching a critical stage. On all sides competitive industries have stepped up their research not only to develop products that compete directly with textiles, but also to capture a greater part of the consumer's dollar. What will be the ultimate outcome if the textile industry continues to lag so far behind its competitors in research effort—if the trend toward non-textile products continues upward—if each year consumers devote a smaller part of their disposable income to products of the textile industry?

The answer to that question is, to a large extent, in your hands. You see many of the opportunities, and you can discover others. You know what research can do. But it is you who must provide the stimulus to greater effort, you who must make clear to your managements and to the industry as a whole the possibilities you see and the means to achieve them.

If you will accept the challenge and carry it forward with all the energy, skill and determination which I know you possess, then our industry has nothing to fear from the future.

Organizing Safety in the Textile Plant

By C. BROOKS SOSSOMON, North American Rayon Corp., Elizabethton, Tenn.

This paper, presented by the author at the 44th National Safety Congress, gives pointers on how to organize plant-wide safety efforts and eliminate hazards.

THE heart and soul of all safety work, I believe, may be summed up in the word "prevention." So far as possible we must prevent the accident by eliminating or overcoming the hazard. Search out, constantly, the accident potential or tendency and destroy it. Thus we determine the prime functions of a safety organization, which would be described as two-fold: (1) Prevent the accident by eliminating or controlling the hazard. (2) Eliminate the accident potential or tendency by educating and training our people.

A successful plant must seek out and use every available, logical and possible method for accomplishing the double-barrelled purpose. Perhaps no two of our plants offer identical problems, but there are conditions which are appropriate to every branch of the textile industry and hence are common to all of us. Some of the elements found in all successful organizations are:

(1) Recognition and acceptance of the need.
(2) Approval and support of management and employees.
(3) Enthusiastic membership of the safety committee.
(4) Maintenance of high department and plant interest.
(5) Supervisors and workers "sold" on safety.

And there are many other elements involved such as an accurate record system, a medical system, incentive plans and training programs. All these elements are vital to the success of the program. Now to be more specific we suggest several ideas concerning the operations and methods of a department: (1) salesmanship; (2) inspections; (3) right people; (4) permanent organization.

Salesmanship—Those of us who are "safety conscious" should consider ourselves as salesmen. In fact we are, in the truest sense of the word, selling a most important commodity—life and limb. We can only sell our people on safety when we are completely sold on safety ourselves.

Inspection—The achievement of a successful safety organization comes only with constant vigilance. We must make the safety program efficient by following up enthusiastically every realistic hazard—every possible "lead"—and one of the best ways to get this result is to keep "everlastingly at it." We cannot stop with mere inspections, no matter how thorough they may be. There must be a "follow-up."

Not only are we to follow up every hazard brought to light by our inspections or reported to us, but perhaps more importantly we are to follow up every accident. When an accident occurs we must find out who was hurt, how was he hurt, did he receive the right treatment, why was he hurt, how can a guarantee be effected to positively eliminate the hazard. We must thoroughly follow up every report of hazards and every accident as well.

Right people—Get the right people in the right slots and then exchange criticism knowledge, suggestions and demonstrations. Let your people, among themselves, raise

THIRTEEN GEORGIA MILLS HAVE PERFECT 1956 SAFETY SCORE—Employees in 13 Georgia mills enjoyed an accident-free 1956 while working a total of 12,284,999 man-hours, according to Frank L. Carter, secretary of the Cotton Manufacturers Association of Georgia. In disclosing results of the association's Eighth Annual Safety Contest, Mr. Carter said that the 114 participating mills wound up 1956 with a combined contest rating 8.9 per cent lower than in 1955. The 114 mills worked a grand total of 139,925,595 man-hours. Contest ratings were based on the frequency and severity of on-the-job accidents which cause the worker to lose time from work after the day of the accident.

Contest chairman C. M. Neuner, of Aldora Mills, Barnesville, said that safety is continually improving in Georgia's textile mills. "In our first contest, in 1949-50, the average rating was 2.350. The 1956 average rating was 1.932, or 18.2 per cent better," he declared. "Textile work perennially ranks among the 12 safest of all U. S. industries."

Mr. Neuner credited the better safety conditions to two factors: (1) Employees are smarter. They recognize dangerous situations and avoid them. Also, they realize the effects an unsafe mill can have on production costs and their employer's competitive position; and (2) employers promote safety through education, incentives and constant inspection of plants to detect and eliminate hazards.

The C.M.A.G. will give awards to the 13 accident-free mills and to winners in other categories at a ceremony in Trion on March 28. The mills with perfect records, and their 1956 man-hour totals were: Martha Mills Division, B. F. Goodrich Co., Silvertown—3,923,546; Dundee Mills Inc., Plant No. 1, Griffin—1,761,059; Thomaston Mills, Griffin Plant, Griffin—1,315,695; Callaway Mills Co., Unity Plant, LaGrange—1,352,070; Clarkesville Mill, Clarkesville—640,178; Chicopee Mfg. Corp., Athens Division, Athens—900,878; Dundee Mills Inc., Plant No. 3, Griffin—468,182; Aldora Mills, Barnesville—518,332; Dundee Mills Inc., Plant No. 2, Griffin—631,268; Coats & Clark Inc., Acworth—309,190; Juliette Milling Co., Juliette—243,281; Bibb Mfg Co., Taylor Mill, Reynolds—154,571; Bibb Mfg. Co., Star Plant, Macon—66,749.

Other winners and their accident and man-hour records were: Canton Cotton Mills, Plant No. 2, Canton —one accident in 1,596,929 man-hours; and Exposition Cotton Mills, Atlanta — one accident in 2,612,376 man-hours.

questions—or maybe a little bit of sand. The end result is that we all become more safety conscious and are diminishing the accident potential.

Permanent organization—And by all means maintain your permanent safety organization with a rotating membership consisting of qualified personnel, representatives of different departments and management. Observe a tight schedule of inspections, follow-ups, interesting meetings and demonstrations; and see that your committee is armed with the necessary authority to enforce—through management—a real safety program.

Controlling Hazards

The basic function of your safety group is the control—or better still the elimination—of hazards. In controlling hazards, there is first the element of recognition. That which is not recognized is not controlled. So first we must consider how best to recognize hazards.

What is a hazard? A hazard is a circumstance, condition or situation which is capable of causing damage to men, machines or product. In other words a hazard is a danger. The number of possible hazards, or dangers, in a textile plant is unlimited, and unfortunately many go unrecognized. As a basic truth, therefore, we may say that for every "accident" there is a hazard, either ignored or unrecognized, and there is no plausible excuse for either.

We control hazards, therefore, by first of all recognizing the hazards. When the hazard is recognized it can be controlled. Never let any of your employees say that an unsafe practice, condition or machine cannot be made safe. Actually the question of the control of hazards resolves itself to a common sense approach. If we are safety minded, if we are hunting for unsafe practices and conditions, we need only to use good plain, common, run-of-mine horse sense. Study the operation, look at the condition with care—and often the solution is apparent. Altogether too often we cannot see the forest for the trees. So a common sense approach is basic.

Two Types Of Hazards

Briefly let's look at two basic types of hazards. The first is the hazard which we will call the temporary hazard, such as those which exist on construction work. There we find scaffolds, rigging, moving loads, elevators, often within the confines of our plants where production must be maintained. How may we control such hazards?

We must see that our construction people know what they are doing and we must see that they do it safely and well. Production processes must be maintained in all our plants, therefore our construction work must be closely and carefully scheduled and integrated with production requirements. All such areas where work is under way must be barricaded and protected. Signs, high visibility rope, painted horses and other devices must be freely used. All hazards must be plainly marked.

The second type of hazard we shall call the "fixed" danger. The fixed hazard differs from the temporary in that it is permanent and must be controlled at all times. Immediately we think of such things as slippery floors, steep stairways, crowded aisles, etc. To control such hazards, we must be constantly vigilant, never complacent, and keep everlastingly at it. Eliminate the danger of steep stairs by installing proper treads and handrails, get proper lighting in dark corners, be meticulous in housekeeping, keep aisles clear, keep power panels accessible, see that protective devices are in working order and in use, keep all your people trained and informed, see that fire protection is adequate, and look into, inspect and check countless other details and items.

Safety And The Supervisor

But fundamental and basic to every safety program is the great fact of the individual worker and his supervisor. A good supervisor is going to consider safety as a part of his daily routine. He is the key man in the set-up. Let us make him so conscious of safety that he will welcome safety committee inspections and recommendations. He will train his workers in safe practices, and to the great pleasure of management and stockholders his department will show high production, sound profit, challenging schedules met on time with satisfied workers who appreciate the interest and care provided. A safe plant is a profitable and happy plant.

DATELINE DARLINGTON:

Labor Day and Labor Trouble Both

By HENRY LESESNE

Probably the biggest Labor Day attraction in the country is the annual 500-mile stock car race at Darlington, S. C. It draws thousands of people each year and puts Darlington in the headlines for days. Now the town is having labor troubles of a different sort, but the townspeople say it isn't as bad as the daily press has made out, and they would just as soon be left out of the headlines entirely.

THERE'S something just a little bit ironic in the fact that Darlington, S. C., is so prominent in the Labor Day datelines. In fact the Darlington dateline symbolizes Labor Day to countless Americans. For seven years now it's been the site of the Southern 500, which has come to be the nation's greatest regularly scheduled sports event on the labor holiday, and last Labor Day the race drew some 70,000 stock car enthusiasts from all parts of the nation.

The big sports spectacle is, indeed, something of the Kentucky Derby of the stock-car racing world. On the holiday that also connotes the slipping by of another Summer season, the vast army of stock-car followers from far and near manages somehow to crowd into the Pee Dee town of 7,000 population to see how the makes of cars they themselves drive perform in a grueling 500-mile test at the hands of ace drivers who make a living with a foot on the floorboard and a steering wheel turned left.

Since Darlington now, unfortunately and through the efforts of the floundring and frustrated T.W.U.A., has come to have an entirely different kind of labor connotation in the American press, and countless thousands of words have been written about the unionization of the 500-odd employees of the Darlington Mfg. Co. and in the tragic aftermath, it is indeed surprising that some alert journalist with a sense of the dramatic and a flair for imagery has not drawn some figurative correlation between these two events.

In the months since the 73-year-old Darlington Mfg. Co. was closed and sold on the auction block the once flourishing town has come to have what is known as a "bad press." Perhaps it was the result in part of overly stimulated pessimism by some of the city's leaders. Anyway, the impression got pretty thoroughly circulated that Darlington is now a ghost town. It finally got so bad that the Chamber of Commerce in Darlington and others in the town commonly known as the "Pearl of the Pee Dee" had to step in and set the facts straight and dispel the growing legend.

By the time another Labor Day rolls around, they say now, Darlington may be well back on the course to normalcy. Certainly this is the hope. But between now and then Darlington is going to continue to be very much in the news. The issue which was created at Darlington toward the end of 1956 is yet to be finally determined. And when that issue is ultimately determined, it will hold vast significance not only for the textile industry but for industry everywhere.

As this is written there is no inkling as to when or what the National Labor Relations Board, of course, is going to decide as the result of the hearing into the charge of unfair labor practices brought by the Textile Workers Union of America against liquidated Darlington Mfg. Co. which a little over four months ago was the main cog in the eastern South Carolina town's economy. The closing of the mill and the aftermath made Darlington something of a national dateline primarily because management is charged by the union with having liquidated the plant to escape having to deal with the T.W.U.A. That charge, in fact, has been made a few times before.

Rather, however, it was because a judicial or quasi-judicial agency of the Great White Father in Washington for the first time is being called upon to decide whether or not a manufacturing enterprise can close up shop if management considers, in the light of all the various factors, that the plant is no longer a reasonably profitable operation or one justified by the return on the investment.

At the close of the Darlington hearing, an attorney for the National Labor Relations Board recommended that the defunct Darlington Mfg. Co. give back pay to former employees from the time the plant was closed in late October until it was auctioned off piecemeal in mid-December. He further recommended the company be ordered to bargain collectively with the T.W.U.A. if the textile plant is ever reopened and that the order should extend to any successor plant.

Union Attorney Max Zimmy of New York, on the other

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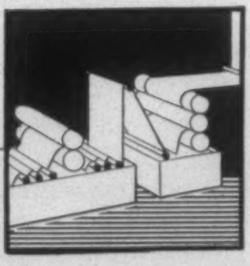

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hand, proposed that the company be required to reopen, continue operations and reinstate the employees. He recommended also that the employees should receive all back pay since the plant closed or back pay for a period of one year. Just how this might be done, since the company is now liquidated and the mill machinery scattered over several states and even into Mexico, no one has sought to explain.

The union's first effort was to hold liable the entire Deering-Milliken chain of which the Darlington plant was a unit. Deering-Milliken was the selling agent for the Darlington Mfg Co. and Roger Milliken, president of Deering-Milliken, was also president and major stockholder in the Darlington company The N.L.R.B examiner rejected the contention that the Deering-Milliken chain as a whole could be compelled to hire former Darlington plant employees at other Deering-Milliken mills or to pay for wages lost at Darlington.

The T.W.U.A. has attempted to make a case that the company is in the position of having discharged its workers illegally for union activity. The situation would seem to be doubtless without anything of a comparable precedent and it certainly would not be within our province to argue legal points or presume to predict what the final N.L.R.B. decision or disposition of the case will be. Yet even if—and we stress the "if"—the T.W.U.A. should get a mere part of what it has been demanding, we can't help but wonder where even any moral victory could lie.

Certainly there would seem to be no way that the liquidated company could become unliquidated. There is no feasible way the more than 500 jobs could be restored through such action. If, through some legal interpretation of—shall we say—a technicality, the displaced workers should gain back pay for the time which they did not work, is that worth the high intangible cost of pouring fresh salt into old wounds. or of prolonging a bitter, recriminative atmosphere which so far apparently has been a great hindrance to Darlington's Mayor T. W. Buchanan and others in trying to get a new industry or industries to replace the mill which was the town's biggest single employer?

A.T.M.A. HONORED—The American Textile Machinery Association was honored last month by Clemson College at the third annual Textile Machinery and Education Day. Taking part in the day-long program Feb. 12 were a host of textile machinery manufacturers and textile school officials. Shown above seated *(left to right)* are Mildred B. Andrews, executive secretary, A.T.M.A.; Dr. Hugh Brown, dean, Clemson College School of Textiles (who arranged the program); and James H. Hunter, A.T.M.A. president and head of the James Hunter Machine Co. Standing: Robert Leeson, president, Universal Winding Co.; Robert Edwards, vice-president for development, Clemson College; F. E. Grier, president of the American Cotton Manufacturers Institute and head of the Abney Mills; Malcolm Shaffner, president, Saco-Lowell Shops; W. C. Chisholm, president, Foster Machine Co.; Charles Daniels, board of trustees, Clemson College; and J. Hugh Bolton, president, Whitin Machine Works.

Anything which the union might consider or view in the light of a moral victory now could be but an empty victory in the perspective of all which has transpired since the very unfortunate situation for which the union was responsible in the first place. The union cannot restore that which is destroyed, and it goes without saying that the union officials and organizers could not have been so unfamiliar with past history as not to have known when they set out to try to organize the employees of the Darlington Mfg. Co. that they were jeopardizing the jobs of more than 500 employees.

Certainly town and civic officials in Darlington are justified in an attitude that the union by doggedly pursuing a course of post mortem has tended to discourage or scare away potential buyers who would have been interested in taking over the plant and trying to operate it as some sort of going industry. And the effect since then, it goes without saying, has hardly made it any easier for Darlington to get new industry or industries, even though it has offered such inducements as ten years of tax exemption.

It is, of course, to the credit of the workers that when they finally did realize the dupe, 83 per cent of them signed a petition to reconsider their vote, but it was obviously too late then, due to legal technicalities. The feeling seems more or less universal among civic leaders in Darlington and among the town's business people that so long as the National Labor Relations Board case is unsettled, industry is going to be wary of considering locating in Darlington. And they invariably add something to the effect that "You can't very well blame them for that."

The impact of the mill's shutdown and the loss of $33,000 weekly payroll have been keenly felt in Darlington, it is admitted, but on the other hand some of the printed reports, the Darlington Chamber of Commerce and others say, have been misleading. The economic blow has been softened considerably by the payment of unemployment compensation claims and by expansions in other industries already in the town. For instance the Dixie Cup Co. at Darlington, a large employer, recently added a new wing and promptly hired more than 100 of the idle workers formerly employed by the closed cotton mill. A pallet-making concern, which will employ 25 more, is in the process of setting up shop, and a garment factory. which will hire about 75 persons, is reported to be making plans to set up business in Darlington.

About an additional 75 former mill workers have found employment in other trades or have gone to other towns to seek or find work in cotton mills, it is reported. At the peak, unemployment compensation checks amounted to about $10,500 weekly and when the 22-week pay period ends for most of the former Darlington Mfg. Co. employees in April, they will have received from $150,000 to $200,000 in unemployment compensation funds. A considerable number of the Darlington mill workers were women and most of these are still unemployed.

To tide over the hardest hit families, surplus government foodstuffs have been distributed. Fifty families qualified after careful screening by the welfare department. Some businesses in Darlington have suffered, it is true; but business on the whole has held up remarkably well, say reports from the Darlington county seat, though merchants generally admit that by mid-April they should begin to feel the economic crimp more severely. That's the time the unemployment compensation checks stop for most of the former mill employees.

But in general, it would seem, the gloom that first gripped Darlington when the mill shut down has tended gradually to be dispelled and some now consider the mill closing a sort of left-handed blessing, since it has served to weld the community into action as nothing else perhaps could have. For one thing, pledges for Chamber of Commerce membership fees have increased from 20 to 100 per cent, according to Joseph V. Funderburk, executive secretary, and the mill closing led to the creation of the chamber's most powerful committee, the 27-man industrial committee, which is energetically going about the task of seeking to attract new industry to Darlington and which reports there may be some hope in sight.

A not uncommon attitude among some Darlington merchants and business leaders is that the turn of events will "shake us loose" and "we'll make more progress than ever" as if nothing had happened. Says Bob Edwards, chairman of the Chamber of Commerce's new industrial committee, who is an automobile dealer: "So far as industry here is concerned, a year from now we'll be better off than we were. We will have more employment than we did when the mill was operating. It is simply that people are realizing that with a loss like the Darlington Mfg Co., we must do something to boost the town's economy."

So when Labor Day 1957 rolls around on Monday, Sept. 2, it may likely find that Darlington has very definitely passed the "hump"—provided there is an early determination of the National Labor Relations Board case, and if it does not have the effect of scaring away outside industry which might otherwise be inclined to view Darlington as a favorable place in which to locate. For it goes without saying, and need not be repeated again, that industry inevitably tends to situate in places where it considers the general atmosphere or climate to be favorable, and the general climate or atmosphere would obviously involve, among other things, the labor situation in a community.

The Unit Method of Checking Simple Arithmetical Calculations

By FRANK VOGEL, Consultant on Statistical Quality Control

How do you check yourself on simple problems of arithmetic? Here's a suggested short-cut which the author found most useful in his many years in the mill.

ABOUT 25 years ago the writer introduced into a large Eastern mill a simple system of checking calculations. Called the "unit method," it can be used by anybody—with a little practice. Excepting the persons directly concerned with mechanical calculators who can check their calculations directly on the machines, the people in the mill, and some in the office, have to do their checking the hard way. Of course this is very tedious and time-consuming.

With a little practice the unit method is very fast, sometimes even faster than a machine. Moreover, the system is practically foolproof. The writer has over the years become so thoroughly convinced of the time saving property of the unit method that he would make the teaching of it a must in every mill. (It may be said here that the system is not original with the writer, merely the adaptation of it to the mill.)

The method of operating the unit method is very simple. It merely consists in bringing a series of figures down to a single unit. For example, in the series 3276, by adding the four figures we get the sum of 18 and by adding these two figures we get the unit 9.

The unit method is particularly well adapted for the rapid checking of addition, multiplication and division. Subtraction does not handle so well and has been omitted.

The checking of the addition of the column of figures in Table 1 is done in the following manner: Add the figures in the usual way. The amount is 53,280. Adding these figures together we get an intermediate of 18, and the addition of these two figures gives the unit 9.

TABLE 1

Addition	Intermediate	Unit
3246	15	6
4189	22	4
9123	15	6
8414	17	8
1617	15	6
5423	14	5
6348	21	3
4955	23	5
7123	13	4
2842	16	7
53280		54
= unit 9		= unit 9

The unit 9 is the only figure we have to check to prove that the addition of the four columns of numbers is correct. This is done as follows: Add the first row of figures together, i.e., 3246. This comes to an intermediate of 15, and the addition of these two figures yields the unit 6. Follow through with each row, getting the intermediate two figures for each row and then the unit. The total of the units comes to 54, and adding these two digits gives 9, which is the same as the unit obtained from the sum of the group of figures. The original addition is therefore correct.

After some practice the intermediate two digits are omitted and only the unit of each row is jotted down. It takes but a short time for any person to acquire the skill for obtaining the unit for each row. And, of course, adding

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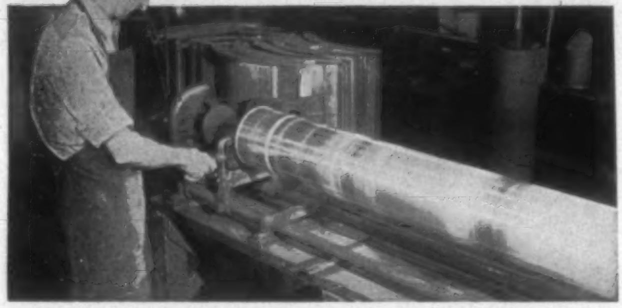

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TABLE 2

Multiplication

3469 = unit 4
276 = unit 6
20814
24283   4x6
6938   = unit 6
957444
= unit 6

TABLE 3A

275 = unit 5
3469) 953975 = unit 2
= unit 4   6938
26017   4 | 2 | 5
24283   4x5
17345   = unit 2
17345
0

TABLE 3B

1688 = unit 5
2876) 4856795 = unit 8
= unit 5   2876
19807   5 | 8 | 5
17256
25519   5x5 =
23008
25115   unit 7 +1 =
23008   unit 8
2107
= unit 1

the ensuing column of units is simplicity itself. Now, if the addition of the unit column did not come to 9, then it would indicate an error either in the original sum or in the making up of the units. This statement also holds true when checking the accuracy of multiplication and division.

Multiplication is even easier to check. First, work out the actual multiplication, Table 2. The product is 957,444. Adding these digits we obtain a unit of 6. This is the only figure necessary to check to ascertain if the original multiplication is correct.

Next, add the digits in the multiplicand—3,469—and procure a unit of 4. The multiplier adds to a unit of 6. Multiplying these two units, 4 and 6, we get a unit of 6. This is identical with the unit of the product. The multiplication is correct. A good plan, in the verification of results, is to link the check unit with the calculation unit as indicated in the examples.

In division, two examples are given, Tables 3A and 3B. The first example is one in which the quotient comes out a whole number. The regular division is carried out and the complete quotient is obtained. This is 275 and it resolves to a unit of 5. This figure we must match by the unit system in order that we may know that our original quotient is correct.

In checking division the writer uses a little cap under which is placed the unit of the dividend. He likes to believe that the cap is original with him. (See Tables 3A and 3B.) In proceeding to check, place the unit from the dividend 953,975 under the cap. This unit is 2. In front of the cap place the unit from the divisor. This is 4. Behind the cap, the unit 5 from the quotient is placed. Multiplying the unit in front and behind the cap, 4 and 5, a unit of 2 is obtained, the same as that under the cap. The answer 275 of the division calculation is therefore correct.

The second division calculation (Table 3B) shows a quotient of 1,688 and a remainder of 2,107. Here is how this type of division is handled: Placing the cap to the right of the calculation, the unit 8 of the dividend is placed under it. The divisor unit 5 is placed to the left and the quotient unit 5 to the right of the cap.

Multiplying the divisor unit and the quotient unit together, 5 and 5, we get a unit of 7. This unit is added to the unit of the remainder, 2,107, and a unit of 8 is obtained which is similar to the one under the cap and, therefore, our quotient 1,688 is correct, as far as we have carried it out.

The simplicity of the unit method, the ease with which anyone can learn to use it, the great saving of time it offers in the checking for accuracy of simple calculations makes the use of it a practical "tool" for any mill man concerned with figures.

Opening, Picking, Carding & Spinning

A REPORT OF

The 1957 Cotton Research Clinic

Sponsored by the National Cotton Council of America

THE eighth annual Cotton Research Clinic, recognized as one of the industry's outstanding technical meetings, was held at the General Oglethorpe Hotel in Savannah, Ga., Feb. 27, 28, and March 1. Sponsored by the Utilization Research Division of the National Cotton Council, the clinic has grown to include each year some 225 leading mill executives and textile research workers. For the preceding three years the clinic has met at Pinehurst, N. C. This year, the meeting was moved to the Georgia-Alabama mill area in order that its sessions might be more accessible to mill men from that region.

Grier, Hardman, Jones

Three top officials of the American Cotton Manufacturers Institute look over recorded data from a nuclear evenness tester at the Cotton Research Clinic. They are: F. E. Grier of Abney Mills, A.C.M.I. president; L. G. Hardman Jr. of Harmony Grove Mills, Commerce, Ga., first vice-president of A.C.M.I.; and Halbert M. Jones of Waverly Mills, Laurinburg, N. C., A.C.M.I. second vice-president. Mr. Hardman served as general chairman of the clinic and addressed the conference on Thursday evening, Feb. 28.

L. G. Hardman Jr., president of Harmony Grove Cotton Mills, Commerce, Ga., served as general chairman of the clinic. In addition to the executive leadership of his mill, Mr. Hardman is president-elect of the American Cotton Manufacturers Institute. Mr. Hardman also addressed the conference following the banquet on Thursday evening, Feb. 28.

First Technical Session

The first technical session was shifted to tight pulley Wednesday morning, Feb. 27, by W. M. Pittendreigh, general superintendent of Riegel Textile Corp.'s Ware Shoals (S. C.) Division. Mr. Pittendreigh is no stranger to chairmanships, since he also serves as president of the Southern Textile Association.

Jack Bogdan, director of processing research at the North Carolina State College School of Textiles, presented the initial paper. Under sponsorship of 16 mills, a research study on "Increased Cotton Carding Production" was conducted by Mr. Bogdan and his associates. This was the first public report of the investigation.

Each co-operating mill furnished laps for the tests and provided yarn spun from the same cotton as one experimental control. At N. C. State the same yarn counts were spun (1) using mill settings and organization, and (2) using settings developed in previous N. C. State investigations with the exception of one variable. This variable—a speed or a setting—was tested at several conditions ranging from below to above normal. Effects of changes in the variables were studied as they showed up in yarn strength, yarn appearance, yarn evenness and carding wastes. Comparison was made with the control yarn spun with the mill's organization.

Basic approach to increasing the production rate was first to improve the quality level at the mill's production rate; then to increase the carding rate until the original quality level was again being produced. Result: the same quality at higher production. Speeds and settings recommended are shown in Table 1.

Experimentation with card settings revealed the following general conclusions:

"Using progressive flat to cylinder settings of 7, 7, 9, 10, 12 thousandths of an inch from the back stand to the front reduces flat strips and total carding waste. The quality of the yarn produced with these settings compared with that produced with uniform settings of 7 thousandths of an inch shows no difference. The back flats, again, appear to be doing the brunt of the carding work.

"On a card equipped with metallic clothing on cylinder and doffer a more open setting of the flats to cylinder (.015") produces a better yarn with less carding waste, except in the case of a waste mix composed of flat strips. A close setting of the doffer to the cylinder reduces total carding waste and produces a more uniform yarn than a wider setting. Close settings of feed plate to lickerin do not affect yarn strength adversely and do show some improvement in yarn appearance."

TABLE 1

RECOMMENDED CARDING SPEEDS AND SETTINGS

	Make Saco-Lowell	Whitin
Speeds		
Lickerin, r.p.m.	800	750
Cylinder, r.p.m.	165	
Doffer, r.p.m.	Depends on production	
Flats, in./min.	3	
Doffer comb, cycles/min.	Depends on production	
Settings: (thousandths of inch)		
Feed plate to lickerin	7	
Mote knives to lickerin:		
Top	7	
Bottom	7	
Top mote knife to feed plate, inches	1¼	¾
Bottom mote knife to bars, inches	1⅛	1¼
Top edge of back plate to flats	10	22
Mote knife angle, degrees	30	27
Lickerin screen to lickerin:		
(without continuous stripper)		
Back	17	64
Middle	17	29
Front	17	17
(with continuous stripper)		
Back	68	
Middle	34	
Front	10	
Lickerin to cylinder	7	
Back knife plate to cylinder:		
Top	10	
Bottom	10	
Flats to cylinder:		
Back	7	
Intermediate	7	
Intermediate	9	
Intermediate	10	
Front	12	
Flat stripping comb to flats	15	
Front knife plate to cylinder:		
Top	22	
Bottom	22	
Doffer to cylinder	5	
Doffer comb to doffer	17	
Cylinder screen to cylinder:	Flange With	Without
Back	29	29
Center	187	68
Front	375	187
Continuous stripper:		
Setting, width of band	1¼"	
Speed, r.p.m.	1750	
Type of lickerin screen	Bar	
Type of cylinder screen	Bar	

Effects of card clothing types were analyzed:

"There appears to be little difference in total per cent card waste or in yarn strength between material carded on a card clothed with 100s/110s wire and one clothed with 110s/120s. Use of the finer wire produces a yarn of slightly better appearance for the longer stapled cottons. Carding of a waste mix is better accomplished on the coarser clothing.

"Lickerins clothed with 8 strands per inch, 4 points per inch wire produced stronger yarns than 15 strands, 5 points per inch wire. The appearance of the yarn obtained by using the coarser wire is as good or better than that for the finer clothing. There is little difference in carding waste.

"Lickerin wire with a less acute point, such as is used for carding synthetics, produces a yarn of better appearance than does normal cotton-type wire, but the total carding waste is increased by about 1½%. This increase results from an increase in motes and fly waste because of the lower holding power of the obtuse point of the wire.

"We have been unable to produce yarn from stock processed on our one card equipped with metallic clothing which is equal in strength and appearance to that of stock processed on a fillet clothed card."

A number of card modifications were tried:

"Inverting mote knives from their normal position decreased carding waste about 1% without affecting yarn strength or yarn uniformity substantially.

"Reversing mote knives from their normal position did not show any improvement in waste, strength or appearance.

"Replacing the curved lickerin bonnet with an improvised cover which was placed higher above the lickerin reduced the total carding waste, mainly because of a saving in motes and fly waste. The yarn uniformity with what is called a square cover is better.

"Increasing the length of the lickerin screen along the curved dimension decreases motes and fly waste substantially, effecting a saving in total carding waste. The appearance of the yarn produced by using the longer screen is as good as that obtained by using the shorter screen.

"Moving the flats intermittently seems to give some advantage in yarn strength appearance."

Finally, the effect of card production rates as reflected in yarn strength was summarized:

"Table 2 shows the comparison of yarns produced using mill settings at the mill production rates with those produced with N. C. State settings and at a production rate approximately 50% above the mill rate. It will be noted that the count strength product did not suffer as a result of the increase in production. It was actually higher in the case of 13 of the 16 cottons used and the total carding waste averaged slightly lower for the higher production rate. An inspection of the yarn boards produced shows that the appearance of the yarn produced at the higher rates of production is no lower in appearance grade.

"Even ranges of carding rates from 10 pounds per hour to 100

TABLE 2

EFFECT OF INCREASED CARDING PRODUCTION ON COUNT X STRENGTH PRODUCT

Mill	N.C.S. Carding Mill Settings Mill Carding Rate	N.C.S. Carding N.C.S. Settings 50% Increase in Production		CS Units Difference
H	1956	2093		+137
I	2072	2200		+128
J	2795	2832		+ 37
K	2107	2128		+ 21
L	2152	2264		+112
M	2213	2247		+ 34
N	2307	2358		+ 51
O	1889	1921		+ 32
P	2199	2203		+ 4
Q	2090	2248		+158
R	1566	1652		+ 86
S	1396	1409		+ 13
T	1987	1938		− 49
U	2341	2324		− 17
V	2555	2653		+ 98
W	2242	2234		− 8
			Mean	+ 52
Ave. Carding Waste	6.2%	6.1%		

pounds per hour show no great variation in strength. The depreciation in yarn appearance over this range of productions is not so great as is commonly believed. To remove the web from the doffer at these high production rates it was necessary to use the Abington web doffing attachment.

"Cylinder speeds in a range from 83 to 350 r.p.m. and lickerin speeds from 400 to 1,690 r.p.m. have been attempted. The high cylinder speed with a proportionately high lickerin speed produces a more uniform yarn.

"It is possible to maintain the same production rate while changing sliver weight and doffer r.p.m. The question arises as to whether it is better to produce a heavy sliver with a low doffer speed or a light sliver at a high doffer speed. Apparently it makes no real difference. There may be some slight advantage in the first drawing operation which results from better fiber control when using lighter weight card sliver."

Metallic Card Clothing

Lower nep counts, stronger yarns and better trash removal have resulted from an extensive conversion to metallic card clothing at Joanna (S. C.) Cotton Mills Co. Joe Delany, general superintendent at Joanna, reported these results in the second paper of Wednesday's session. This paper, entitled "Mill Experience in Full-Scale Changeover to Metallic Card Clothing," came as a follow-up to a session at the 1954 clinic which presented two papers on metallic wire.

History of the Joanna conversion goes back to tests run in 1951 and '52 which showed consistently fewer neps on the metallic cards. In January of this year, nearly 80 per cent of Mr. Delany's cards had been clothed with metallic wire and quality was at a new high.

The road to this point had gone the route of constant trials, learning and experimentation, however. Details such the precision of surface grinding, type of base wire, kind of splice in metallic wire, proper tension for winding on at various points across the width of cylinder and doffer, and technique for finish grinding the wire had shown their importance and, one-by-one, been worked into an ideal procedure.

A finer (20 points per inch, 80° tooth angle) cylinder was established as the best performer in combination with a doffer wire having ten points to the inch and a 50° angle of tooth. (Old doffer wire: 14 points 80°).

The new metallic clothing cleans more efficiently. Shirley Analyzer tests on card fly and flat strips from metallic and fillet clothed cards show four per cent more trash (or less lint) in fly from metallic clothed cards. Analysis of flat strips shows nine per cent more trash in this waste from cards using metallic wire than in strips from fillet clothed cards.

Comparison tests on yarns from the two types of clothing show a decrease in neps-per-50-yards for metallic clothing in both warp and filling. Strength is higher for filling yarns from the new clothing by a break factor of 2,117 vs. 1,965. In warp yarn, fillet wire has a slight edge in break at 2,210 compared with 2,169. *(A detailed report of Mr. Delany's paper will be published in a future issue of* TEXTILE BULLETIN.)

Discussion

During the discussion period on metallic clothing, H. Windfeld-Hansen, a mill owner of Vejle, Denmark, offered his comments on the subject. Mr. Windfeld-Hansen's mill has been completely on this type of wire since the 1930s. He emphasized the importance of precision maintenance and care. "The 'human element' has too often been neglected in metallic wire installations," he said. Accurate grinding of flexible bends to permit setting flats to .005 of an inch was recommended. A continuous routine of checking and maintenance is required to see that close settings are maintained, he pointed out.

The mill which he owns has experimented with metallic flats. Their experience, to date, does not recommend these flats because they fail to retain enough flat strip to clean effectively. Their extra weight causes excessive wear on the flexible bends and on the flat ends, also.

Cotton Mill Waste

Concluding paper of the first session was given by Bob Miraldi of the Cotton Council's technical department staff. Mr. Miraldi's presentation was a preliminary report on the co-operative survey of cotton mill waste which is being undertaken by the council.

The principal objective of the waste study was establishment of current, accurate waste figures for each of the major yarns and fabrics produced by American mills. These waste factors are essential to accurate market measurement. Present figures used in converting from finished to the common denominator of cotton bale equivalents are 24 years old. The need for up-to-date data is apparent.

In addition, the coded mill reports on waste, raw stock description, production rates and opening lines offer mills a chance to compare the efficiency of their own operations with other plants on the same fabric.

General indications of the survey are that:

(1) Waste removed by mills has dropped by an average of four to five per cent since 1933. Smallest change is indicated by print cloth mills, while decreases of seven to eight per cent are shown in combed fabrics and the higher quality carded goods.

(2) Trends in cotton fiber properties include a steady decline in average grade index (or increase in quantity of lower grades produced) from 1928 to 1946, followed by a leveling off in trend. A general progression in other fiber properties since 1946 is toward longer, finer, stronger cottons in the average for the U. S. crop. Average maturity and length uniformity ratios continue at a fairly constant level.

(3) While fiber qualities—particularly grade—affect waste, the net decline in mill waste has resulted from fiber properties in combination with improved machinery and increased waste consciousness on the part of mill personnel.

(4) The efficiency of a mill's waste control may be judged by comparison of its waste factors with other mills. As a supplement to this comparison, raw material and production data have been gathered from each mill co-operating in the survey. A detailed report covering every mill and every yarn and fabric included in the waste study will be published.

Second Technical Session

The second technical session was conducted Wednesday afternoon by Stuart Sherman, developments manager of U. S. Rubber Co., Winnsboro, S. C. Mr. Sherman introduced speakers who presented three papers on the general subject of cotton fiber technology.

In the first report, K. L. Hertel, director of the University of Tennessee fiber research laboratory, outlined his investigations on cotton fiber strength. Reviewing common practice today, Dr. Hertel pointed out that main industry emphasis in fiber quality is on staple length and in yarn quality on skein strength. Because it is most clearly visible and easily measured, staple length tends to be given greatest credit for yarn strength. Other studies indicated, however, that fiber tensile strength may be more important to yarn strength than either length or fineness.

In his laboratory work, Dr. Hertel has studied the influence on fiber strength of staple length and the spacing between jaws of the fiber strength tester. Each of three cottons was sorted into length groupings by one-quarter of an inch intervals on a Suter-Webb sorter. Fibers in each group were broken on a Stelometer at a range of jaw spacings from 0 inches to 7/32 inches. Test results indicated a "pattern of weakness" within the fibers which was proportional to fiber length.

Two assumptions may be made about the weakness pattern: (1) that it varies in intensity with length, or (2) that the magnitude of the weakness remains fixed, but the spacing of the weak spots becomes wider as fibers lengthen. In the latter case the same pattern would appear to be genetically imprinted on each fiber and the ultimate spacing would be the result of final fiber length. Further analysis points to the second assumption.

The weakness pattern appears more favorable in longer varieties. Breeders seeking strength (in yarn) might do well to start with a foundation variety having too long a staple. Allowing length to decrease, they could select for yield, disease resistance and other desirable characteristics. Retaining a favorable pattern of weakness in this way might result in high-strength yarns from cottons described today as short or medium-staple. This is, of course, still in the area of conjecture. Dr. Hertel emphasized that his report was preliminary and that much further investigation remains to be done.

Thomas Kerr, fiber technologist at the U.S.D.A.'s Beltsville, Md., Experiment Station, reviewed fiber strength in the cotton breeding program. Title of Dr. Kerr's paper was "The Relation of X-ray Angle to Fiber Strength."

Dr. Kerr pointed to a relationship between the spiral structure of cellulose chains in cotton fibers (X-ray angle) and strength. Several aspects of this relationship were reviewed: Correlation between X-ray angle and strength is not as high as early studies indicated. Still lower correlations exist when strength is measured at finite gauge spacings rather than at zero gauge. This relationship is on a different level for Egyptian cottons (30° angle, Pressley Index 10.4) than for Uplands (30° angle, Pressley Index 7.8).

All studies, nevertheless, show an over-all relationship between X-ray angle and strength. It is logical to assume that X-ray angle is a measure of potential strength—that is, strength without weak places in the fiber.

The concept of potential strength is important in cotton breeding. Selection for strength may be associated with a higher potential strength (higher X-ray angle), it may be governed by less strength loss with increasing gauge length than standard Upland cottons, or the selection may involve a combination of the two factors.

Efforts to find stocks with low rates of strength loss for transfer to varieties having high potential strength have met with only limited success. These lower rates do occur in Barbadense long staples and some progress is being made in transferring such characters to Upland cotton.

The Wednesday afternoon program was completed by Ludwig Rebenfeld of the Textile Research Institute, Princeton, N. J. Dr. Rebenfeld discussed "The Effect of Processing on Cotton Fiber Properties." Six different cottons were selected to embrace a broad variety of fiber characteristics. Cottons used were a Pima, Deltapine, Sea Island, Acala, Hybrid and Lengupa. One bale of each variety was processed under identical conditions into a standard sheeting construction. Portions of the fabric were scoured, bleached and mercerized, and resin finished.

Fifty fibers were removed from each of the following stages and evaluated for mechanical properties: the bale, the yarns, the scoured fabric, the bleached and mercerized fabric, and the resin-finished fabric. Fabric breaking strength and elongation were measured, as were single fiber breaking stress, single fiber elongation at break, single fiber elastic modulus, and single fiber uncrimping energy.

Averages of the four fiber properties at the several processing stages point to certain generalizations about fiber changes during processing. The average fiber breaking stress is decreased significantly only by resin finishing. As a result of tensions on fibers during processing, fiber breaking elongation decreases steadily throughout the entire manufacturing cycle. Average elastic modulus does not appear to be significantly affected by processing steps subsequent to spinning. There is a large increase in fiber stiffness (elastic modulus) from the bale to the yarn. Fiber uncrimping energy decreases from bale to yarn as a result of processing tensions. Fibers from fabrics show sharp increases in uncrimping energy because of the fabric crimp that is superimposed over fiber crimp. A large increase in fiber crimp due to resin finishing indicates deposition of considerable resin on the fiber surface.

The cumulative effect of all processing up to and including mercerization is to level out differences among the six cottons. The differences in properties measured in the bale are in a large measure eradicated when fibers from the mercerized fabric are considered.

Third Technical Session

Cleveland Adams, dean of the School of Textiles at Auburn Polytechnical Institute, served as moderator of the third technical session. First speaker on this program was Philip Ewald of the University of Tennessee, whose paper was entitled "Uniformity Analysis of Yarns, Rovings and Slivers Using Beta Radiation."

Neither pressure roll nor electrical capacitance uniformity analyzers measures directly the mass of the cross section being tested. A positive measure of mass would, however, be achieved in an analyzer using a radiation absorption detector. With this goal in mind, Mr. Ewald and his associates undertook the design of a uniformity tester which employed Beta radiation as a sensory mechanism.

In designing the tester, Thallium 204 was selected as a pure Beta ray emitter with a half-life of four years and a reasonable cost of $5 per millicurie. A two-millicurie source was calculated to cover the range of mass that would be tested and permit accurate measurement, since only about one per cent of the emitted particles pass through the cotton.

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used for a radiation detector. A preamplifier was constructed to match the ion chamber to a stock model electrometer. A strip chart recorder plugged into the electrometer completed the analyzer.

Calibration tests indicated that the instrument was performing satisfactorily. Actual weighings of yarns and rovings plotted against their charts from the analyzer showed acceptable linearity. The pilot model measures cross sectional mass of yarns, rovings and slivers; is limited in response by statistical fluctuation of the source; and on a continuous basis measures instant, mean and variance values.

Sliver Evener For Roving Frames

"A Sliver Evener for Roving Frames" was described by its inventor, Dr. Hugh Brown, dean of the Clemson College School of Textiles. In view of the attention paid to attaining uniformity at the early mill processes, a device which would feed various size slivers into the roving frame at correct rates to produce a single, uniform size roving at all deliveries is highly desirable. Such a mechanism must continuously sense the size of the sliver and make corrections for changes. It must be relatively simple and inexpensive both to buy and to maintain.

Dr. Brown described a device comprising matched pairs of conical feed rolls with a weighted saddle. A pneumatic shifting mechanism changes sliver position on the rolls as needed to give a constant rate of input. Sliver passing through a trumpet into the rolls offers resistance to air flow in the air-actuated servo mechanism. The sliver is pneumatically positioned on the rolls according to its size as indicated by the resistance. The unit operates at around three pounds air pressure.

In tests where slivers over a range of 33 to 50 grains were fed, the compensation was excellent. Output sliver was corrected to 31 plus grains per yard and in all cases coefficient of variation of the readings was less than one per cent. These tests are on average sliver size as measured in one-yard weighings. Short term variation is not so well compensated for. If a 25 per cent step is made in the input sliver, it takes about three inches of sliver for complete correction. Correction for long-term variation of small amplitude is excellent and even imperfect correction for large variation is better than no correction at all.

Successful use of the device should make close control of picker lap weights unnecessary. Output sliver size would be essentially independent of moisture in the stock, which is not the case when sizing sliver by weighing.

Dr. Brown emphasized that the sensory mechanism is affected to an extent by variations in fiber fineness, as in any air flow device; however, blending should successfully control this source of difficulty.

Roll Run-Out In Spinning

A paper entitled "The Effect of Roll Run-Out in Spinning on Yarn Quality" was presented by J. E. Dougherty, head of the textile engineering division at the Institute of Textile Technology. The studies on which this report was based were undertaken as part of the institute's technical service work for its member mills.

Investigations of top roll eccentricity in England pointed to the imperfect drafting which takes place because of "nip movement" as the eccentric roll turns. Further study at I.T.T. showed that an eccentric bottom roll created still another source of non-uniformity. While a top roll has a relatively constant surface speed because it is contact-driven, the surface speed of a bottom roll will change as its effective radius changes with eccentricity.

In the first test, eccentricity in the front roll, only, was studied. A new roll was purchased and a doff of yarn produced without change in the roll. For subsequent doffs, the roll was machined down at the bearing section to permit the use of eccentric sleeves to introduce run-out. Sleeves were made to produce .003, .006, .009, .012, .015, .018, .021, .025 and .030 inches of run-out. Yarns spun were tested for uniformity, for skein strength and for single end strength. As greater amounts of eccentricity were introduced, quality deteriorated. The point at which uniformity and strength began to decrease rapidly appeared to be about .007 inches.

Later experiments investigated the effects of eccentricity in front, middle and back rolls and over a range of drafts and yarn sizes. Results indicate that, while middle and back bottom roll eccentricities are not critical factors affecting yarn quality, the run-out in the front bottom roll can significantly lower yarn strength and uniformity. This deterioration in quality takes place more rapidly as the draft increases. It is suggested, as a minimum schedule, that mills check front roll eccentricity when new rolls are installed and at the periodic overhaul of the spinning frame.

The Relation Between Twist And Strength

A report from Charles B. Landstreet, University of Tennessee fiber technologist for the U.S.D.A., completed the third clinic session. Mr. Landstreet's paper was entitled "The Relation of Twist to the Construction and Strength of Cotton Rovings and Yarns." In many instances it is desirable to be able to predict accurately from data on a particular yarn count the twist to produce maximum strength in other counts of yarn made from the same cotton. In addition it has been demonstrated that the old square root relation for calculating twist is not accurate over wide ranges in yarn numbers. Mr. Landstreet presented a method for calculating twist to produce maximum strength where quantity of stock or other limitations will not permit experimentation. His twist guide takes into account yarn contraction with twist and develops a new twist factor "J" to replace the twist multiplier.

Clinic Dinner

L. G. Hardman Jr., A.C.M.I. executive and general chairman of the 1957 clinic, delivered the principal address following the clinic dinner on Thursday evening. Master of ceremonies for the after-dinner program was Malcolm E. Campbell, dean of North Carolina State's School of Textiles.

Mr. Hardman's address, "The Textile Industry Needs Cotton Research," was a searching appraisal of the present need for textile industry research and a forecast of the potential gains from research investment. He pointed to the present cost/price squeeze in which our mills find themselves in a highly competitive market. Mr. Hardman cited changes that had come about during the period of his personal connection with the textile industry. He stated that wages had increased five and one-half times; cost of cotton

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GASTONIA, N. C. . . 914-916 East Franklin Ave. . . Tel. UNiversity 5-0891 has gone up three and one-third times; supplies, repairs and power have increased two and one-half times. Meanwhile the price of finished goods has risen only two and a quarter times. In the light of this competitive situation, research may well be the key factor to the future success of the textile industry.

There are indications that research expenditures may have a direct tie-in with industrial growth rate. The aircraft, electrical, machinery and industrial chemicals industries, which spend most for research, have the highest rate of growth. Food, lumber and textiles, which spend the least for research, show the lowest rates of growth. Mr. Hardman contrasted the nine per cent of the sales dollar spent by the aircraft industry, the six per cent by electrical equipment, and the three per cent by industrial chemicals to the less than one-tenth of one per cent spent by the textile industry.

"Research," he said, "is not an expenditure, not a luxury to be afforded only in good times. Research is an investment in the future, a down payment on new processes and new products that can lead to new business, to real expansion and to higher profits." He quoted a recent writer who estimated the average return on research investment at between 100 and 200 per cent per year, for a 25-year period.

Final Technical Session

Speakers for the fourth, and final, technical session of the clinic were introduced by Chairman F. H. (Skeebo) Martin, director of research at the Springs Cotton Mills Co.

"Some Phases of Opening and Picking Evaluation" were reviewed in the first paper, presented by Woodbury K. Dana of Saco-Lowell Shops, Biddeford, Me. Mr. Dana outlined the trend toward greater precision in textile testing. He noted that evaluations in opening and picking rooms have not yet been approached with the same thorough analysis that is used in making yarn and fabric tests. He stated the opinion that many opening and picking analyses were of no practical value as the size of the sample taken, the length of time over which the test was conducted, and the scope of the test were confined to too narrow or too short limits.

Since primary importance of an opening and picking line is to remove trash from stock without appreciably degrading the character of the cotton, the extent of cleaning in each machinery unit and its effect on subsequent machine operations should be checked in an evaluation. Mr. Dana presented and discussed a set of forms which have been designed to collect all pertinent information for an evaluation test. He suggested that all opening and picking tests be carried through the card, if not further, in order to determine their ultimate effect on quality.

Kerr, Hertel, Johnson

K. L. Hertel, director of the University of Tennessee textile research laboratory is shown explaining the effects of tensile strength tests at various instrument jaw spacings to Burt Johnson of the National Cotton Council and Thomas Kerr of the U.S.D.A. Laboratory, Beltsville, Md.

Common Practices Analyzed

A number of common practices now used in opening rooms have been experimentally analyzed in the research laboratory at Whitin Machine Works. Dr. Zoltan Szaloki, assistant director of research at Whitin, reviewed these investigations in a paper entitled "Studies on Cotton Opening and Cleaning."

Blending feeders were intentionally overloaded to operate at a production rate of 300 pounds per hour. Cleaning efficiency for the line operating feeders at the recommended rate was five per cent higher. Dr. Szaloki suggested that one way to assure an even feed to the individual blending feeder may be through use of an extended feed apron. This practice is not very popular in the U. S., but has met with considerable acceptance in Europe.

In a test between long ducts using fans through which the stock passes and short piping, the long pipe system was found to raise the new count per ten grains from 270 to 290. Dr. Szaloki stated that it was highly desirable to avoid compression by feed rolls or other means in opening and cleaning lines. The present system developed by his company uses a "paddle" type condenser to eliminate the rolling action between cotton and the "cage" type condenser which has been standard in the industry for so many years.

A series of tests were run using three types of opening lines: (1) no opening machinery, the cotton being fed directly from the feeders to the picker; (2) a line designed to over-machine the cotton; and (3) a standard machinery organization using blending feeders, Axi-Feed, feed table, Axi-Flo downstroke openers, and a picker.

Compared to the conventional line, the line with no opening produced a higher nep count by about 30 neps per ten grains, the lickerin waste was 8.2 per cent higher and the flat strip was 6.5 per cent higher. The increased wastes might be expected in view of the lack of customary opening and cleaning. Yarns from this comparison test were spun. Compared with the standard organization, yarn from the line with no opening equipment was more uneven (114.4 vs. 103.1), had a greater size variation (4.0 per cent vs. 1.7 per cent), had a slightly lower break factor (2205 vs. 2285), and was lower in appearance grade. The same results were obtained in tests using both Strict Middling and Strict Low Middling cotton.

Studies indicate that using two similar machines in tandem is relatively ineffective. If, for any reason, two identical opening machines must be used, the best procedure is to insert a different type of machine between them.

Two papers on the S.R.R.L. Integrated System for Opening and Cleaning Cotton concluded the clinic program. The first of these papers was presented by Ralph Rusca, who spearheaded development of the S.R.R.L. opener. Mr. Rusca's paper dealt with a modification of the S.R.R.L. opener which has been re-designed to effect a degree of cleaning as well as opening.

The paper reviewed the concept of an integrated cleaning line in which each machinery component was specifically designed to serve a particular opening or cleaning function and to accommodate the fiber tuft size delivered by the preceding machine. As originally envisioned, this line would include the customary blending feeders, a feed table, an S.R.R.L. opener-cleaner, two aerodynamic cleaners (each of which would accommodate half the production of the opener-cleaner), and pickers equipped with carding cleaners instead of the conventional beater section. While a laboratory model of the aerodynamic cleaner was designed, it was found that the desired cleaning efficiency could be obtained without the employment of this machine. It was therefore dropped from the proposed integrated cleaning line.

Ralph M. Rusca (*left*), in charge of mechanical processing research at the Southern Regional Research Laboratory, New Orleans, La. outlines the effects of S.R.R.L.'s integrated opening and cleaning line for J. C. Craven of the University of Tennessee fiber research laboratory.

Describing the opener-cleaner, Mr. Rusca pointed out that it is basically the S.R.R.L. opener with built-in cleaning devices. The machine incorporates the opening and blending ability of the earlier opener, requires less air to operate, has higher production and is slightly larger in size. In its present form, the opener-cleaner uses nine lickerin-type cylinders: one kicker cylinder, four opening cylinders, two cleaning cylinders and two doffing cylinders. By comparison, the present S.R.R.L. opener has one kicker, five opening and five doffing cylinders. None of the teeth intermesh. The cotton fibers are never held firmly, but are always free to move in the direction of greatest force. The cleaning cylinder rotates at a higher surface speed than the opening cylinders and gently removes the finely divided fibers from the opening cylinders and passes the fibers over cleaning devices. In turn, the doffer cylinder removes the fibers and casts them into a stream of conveying air.

S.R.R.L. studies have shown that wire-wound or gin-saw type tooth cylinders in combination with grid bars will not damage cotton fibers, provided (1) the cylinder-grid bar set-up is properly designed, (2) the cotton is exceptionally well opened, and (3) the cotton is not fed to the cleaning cylinder by means of rolls, roll and plate, or any other mechanical device that firmly holds the fibers. The grid bar arrangement under the two cleaning cylinders of the machine is preceded by another segment which also effects cleaning but which cannot be described at the present time due to lack of patent protection.

Experimental evaluations were conducted on the opener-cleaner, using as a control an opening line comprised of a blending feeder, horizontal Buckley opener, cage section, porcupine-type cleaner, overhead condenser, hopper feeder and picker. The opener-cleaner was hand-fed at 1,500 pounds per hour using stock previously run through the hopper feeder. Five bales of commercially-grown cotton varieties were used in the evaluation.

Neither of the two lines had a significant effect on fiber length or length distribution. The opener-cleaner line removed 25.6 per cent less waste and provided a slightly cleaner picker lap. Analysis of the waste from the opener-cleaner line had eight per cent more trash and eight per cent less lint in the waste, as compared with the control. Shirley Analyzer tests on the raw cotton and the picker lap show an average of four per cent more cleaning and 0.4 per cent less lint loss for the opener-cleaner line. Cleaning efficiency for the opener-cleaner, alone, was 35 per cent and the lint loss 0.3 per cent. Indications are that the cleaning efficiency of this machine will decrease to about 28 per cent if its production rate is increased to 3,000 pounds per hour. Quality evaluation tests from cards through spun yarn disclosed no significant difference in quality between the two lines being evaluated.

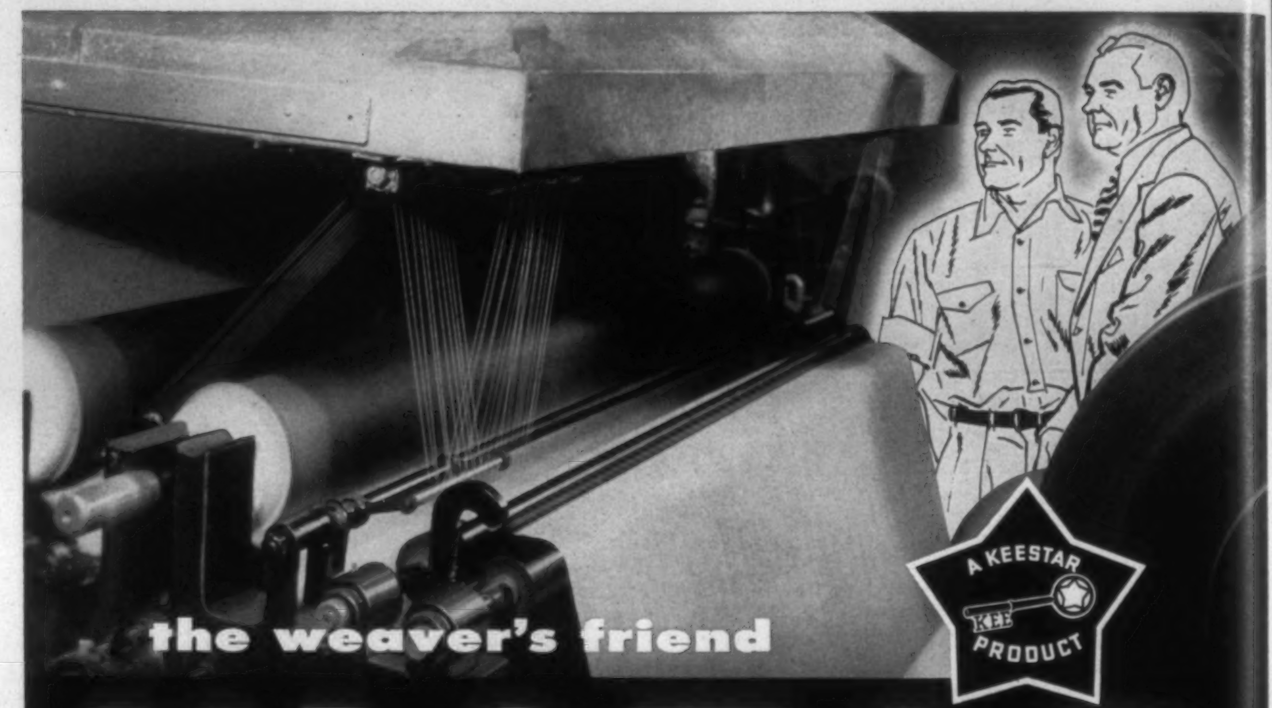
Final Paper

The final paper on the integrated system was presented by George J. Kyame, also of the Southern Regional Research Lab. Mr. Kyame's subject was "The Carding Cleaner and the Integrated Unit." A preliminary report at the 1955 Cotton Research Clinic described an early model of the S.R.R.L. carding cleaner. In this paper it was reported that cleaning efficiencies of about 70 per cent at 400 pounds per hour were obtained using the new unit. The relatively low rate of production and the extreme openness of cotton delivered by this machine indicated that it might be best employed as the beater section in the finisher stage of a picker. Research, therefore, has been directed to adaptation of this cleaner as a unit of a conventional picker.

The finisher section of the picker was stripped of its beater, evener peddles, feed rolls, damper box and fan. These were replaced with a toothed cylinder, an anti-pluck feed roll with its associated guide bar, an air-blast doffer and fan, and a modified cage housing and beater cover. A variable speed drive was attached to the feed roll and this, in turn, determined the weight of the lap produced. A blending reserve on a picker was converted to an automatically controlled conveyor for transporting the breaker bat from the breaker section to the carding cleaner. Although there was no form of automatic evenness control, lap weights were found to vary not more than plus or minus one-half ounce per yard.

As in the case of the opener-cleaner, pilot tests were conducted to compare the carding cleaner with a control line of conventional mill machinery for cleaning efficiency, lint loss, fiber damage, neps, yarn strength and uniformity. On the five cottons tested, the cleaner disclosed an average cleaning efficiency of 50.6 per cent at 435 pounds per hour with only .18 per cent loss. No significant differences in neps were disclosed, and a reduction in card strips from laps made using the carding cleaner unit ranged from 0.3 per cent to 0.7 per cent of the weight of cotton processed. No significant differences in quality from the cards to the spun yarn were disclosed.

A preliminary test was run to determine the efficiency of the entire proposed integrated system. The cleaning efficiency obtained from this system using both the opener-cleaner and the carding cleaner was 81.5 per cent, or about 56 per cent higher than the cleaning achieved in the control line. Lint losses are nearly 40 per cent lower in the integrated system than in the control line.



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A Study in Loom Fixing

By FRANK D. HERRING (Part Twelve)

A GOOD, or superior, loom fixer will actually spend from 30 to 60 per cent of his "on the job" time engaged in fixing looms in his section that are not functioning properly. The average loom fixer will spend from 50 to 80 per cent of his time fixing looms. The inferior loom fixer, and there are many of them, will spend his entire on the job time struggling to keep the looms on his section in operation.

The three positive statements above concerning the three types of loom fixers are not mere conjectures or guesswork, but are the actual figures arrived at over a long period of time spent in checking the loom fixers in a large Southern weaving mill. Incidentally, this is a recent check, made during the year 1956, and does not go back and include the time a few decades back when good loom fixers were really a scarce commodity. This was not the condition before the advent of the automatic loom, because the looms in use in those days were very crudely constructed and simple machines compared with the automatic loom of today, and very little skill was required on the loom fixers' part to maintain them and keep them in operation.

It has often been said down through the years that loom fixing was the weakest link in the manufacturing chain in the weaving mill, and judging from the figures just cited, it is highly indicated that the same is true today. There are more good loom fixers today, and more being trained to become good loom fixers than ever before, because more and more mill men, and also the loom builders have, and are becoming more aware of this weak link, and are doing something about it. But there is a long way to go yet before the loom fixers are brought together on as equalized a basis as are the fixers in the carding and spinning departments.

There is entirely too wide a margin of difference between superior and inferior loom fixers, and the only way to alleviate this condition is for the supervisor to institute a loom fixers' training program and follow through on it until the inferior loom fixers have progressed upward out of the lower class. In the event that some of the fixers do not make the necessary progress they should be transferred to other work. Sometimes these inferior loom fixers can be used to an advantage on breakdown, or overhauling work. An occasional fixer is inferior because he is slow about doing his work, and does not know how to take advantage of it. He might be an efficient workman, and do close, precision work when he knows just what to do. The superior loom fixer is such because he knows how to proceed with his work when he is called to a loom that is not functioning properly. He works by a planned program that enables him to locate the trouble with the least effort and loss of time, and thereby is enabled to do his work with a minimum of effort and stay ahead on his job instead of the job being ahead of him. In other words, when he goes to a loom and learns what it is doing, or failing to do, he knows the things to check that will contribute to the trouble, and he proceeds to check these things and find the trouble, fix the loom and be on his way without wasting any time in searching and wondering just what to do. He also avoids doing a lot of guesswork loom fixing which could, and often does leave the loom in much worse shape than it was before he worked on it.

Trapped Filling Bobbins

One of the things the loom fixer is often called upon to do is fix looms that are trapping the filling bobbins when the transfer mechanism fails to place the bobbin properly in the shuttle on the transfer from the battery into the shuttle. The least that can happen on a transfer failure is a broken filling bobbin, with damaged filling yarn contained on the bobbin. But many more serious things can, and often do happen, such as broken picker stick, broken back and front box plates, broken battery stand, broken bobbin support, bursted or broken shuttle. And every one of the above mentioned possibilities require considerable time and work on the loom fixer's part to repair and get the loom back in operation. When the fixer is called to a loom that is trapping the filling bobbin he should check the following things in the order named to locate the cause of the trouble quickly and easily.

The shuttle.
The breast beam and battery stand.
The bobbin support and bobbin guide.
Rocker shaft bearing, on battery end.
Crank arm, on battery end.
Position of the lay in relation to the battery.
Position of shuttle in relation to transfer mechanism.
The transfer mechanism.
Tension on cloth.
Shuttle boxing, both ends.

Regardless of why the fixer is called to a loom he should always examine the shuttle very closely, because a defective condition in any of the shuttle's many parts can create problems and additional work for the fixer and also the weaver. If the shuttle spring is excessively worn, loose or broken it will cause the bobbin to become trapped on the transfer.

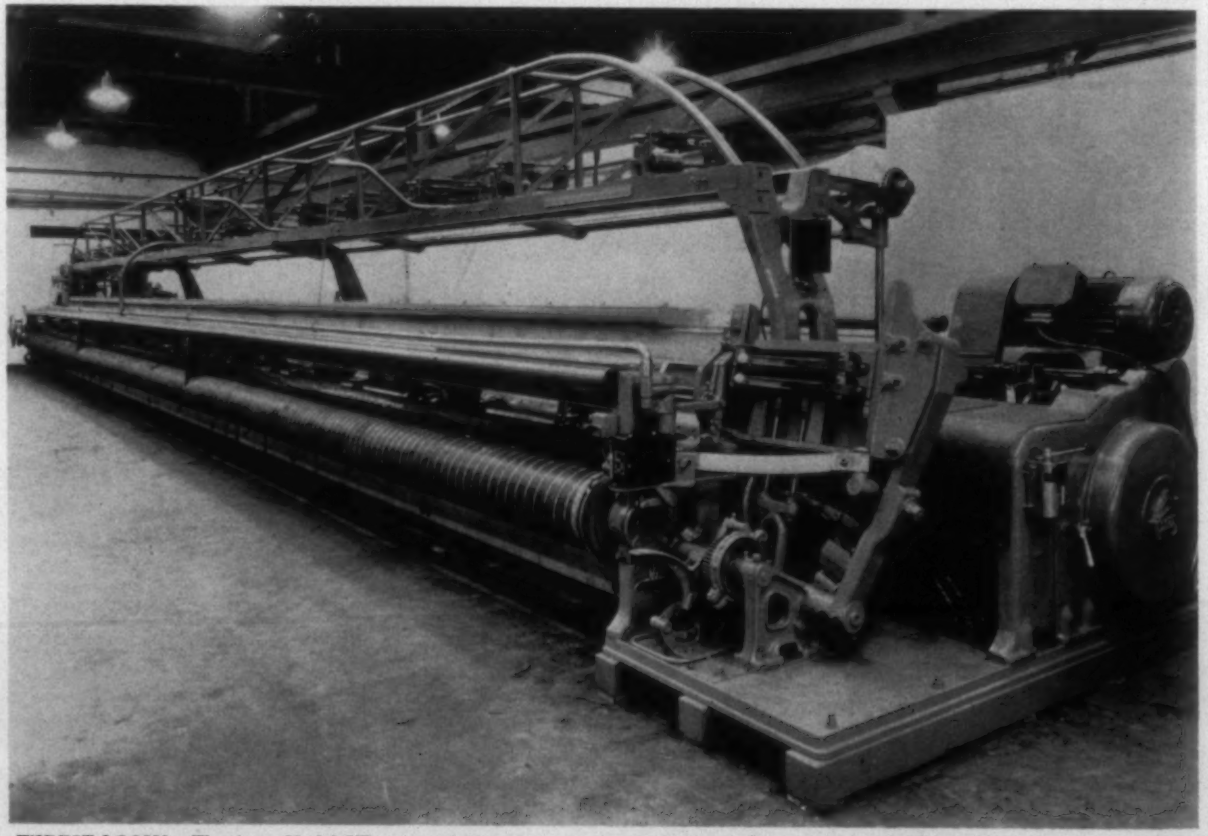
Next, the fixer should examine the breast beam and the battery stand. The battery stand is mounted on the breast beam, and if either one of these parts is loose it will allow the entire battery assembly to rise up out of position when transfer of the bobbin is made. This will interfere with the orderly transfer and sometimes will cause the bobbin to become trapped. The fixer can make this check quickly and easily by taking hold of the battery thread guide and pulling upward on it. This will allow him to detect quickly if either one of these parts are loose. It is absolutely imperative that both of these parts, the breast beam and the battery stand, be kept rigidly tight and in place at all times. That is why the loom builders have seen fit to secure them in place with both bolts and dowel pins.

Next, check the bobbin support and the bobbin guide. If either of these parts are excessively worn or loose it might cause the bobbin to become trapped on the transfer. Also, if the bobbin support spring is broken or has insufficient tension on it this will sometimes cause the transfer mechanism to lose control of the bobbin on the transfer and trap the bobbin.

Check the rocker shaft bearing on the battery end. This can best be done by taking hold of the end of the lay and pulling upward on it. By this method the fixer can readily determine if the rocker shaft box is loose or excessively worn, and at the same time he will detect if the sword is loose, and of course if the sword is loose he should correct this condition. The battery is a stationary part, and the filling bobbins are contained in the battery. The lay is a moving part, and the shuttle is contained in the lay. So, when the filling bobbin is transferred from the battery into the shuttle it is absolutely imperative that the lay be in the same position each time when the bobbin is transferred from the battery. If the rocker shaft bearing or the sword is loose or excessively worn it can allow the lay to rise up when the transfer is made and this will allow the transfer mechanism to drive the bobbin too deep in relation to the shuttle and cause the bobbin to become hung, or trapped. This would be more prevalent on the heavier fabrics, but can happen on any weave.

Next, check the crank arm on the battery end and remove the lost motion in it, if any, as lost motion here would cause the lay to vary in its position on front center when the bobbin is transferred, and thereby cause the bobbin to be trapped sometimes. When the fixer checks the crank arm for lost motion he will also determine if the crankshaft bearing is loose, as this will cause the same trouble as lost motion in the crank arm. Of course the fixer should check the crank arm on the shipper end also, and remove any lost motion that might be there, because this can cause trouble with the filling motion on the shipper end.

Then, check the position of the lay in relation to the battery. As previously stated the lay must be in the same, and correct position when the transfer is made. The fixer should remove the bobbins from the battery and move the lay to exact front center position and then press the transfer hammer by hand all the way down until it makes contact with the rings on the bobbin and then check the position of the back side of the transfer hammer in relation to the inside back wall of the shuttle. There should be a clearance be-



WIDEST LOOM?—The Astra Model UF universal loom has an over-all width of 70 feet and an effective reed space of 60 feet. Custom designed by Bergedorfer Eisenwerk A-G, of Germany, for Shuler and Benninghofen, Hamilton, Ohio, the loom is reported to be the widest weaving loom in the United States. Sold through Bergedorfer Eisenwerk's American affiliate, The De Laval Separator Co., Poughkeepsie, N. Y., the loom is to be installed at Shuler and Benninghofen for manufacture of papermakers felt and other high-density fabrics. Listed as some of the loom's mechanical features are the following: variable speed drive; 17-harness capacity dobby; positive warp let-off; large capacity shuttles accommodating cops 2⅜ inches in diameter by 20 inches in length; and latest electrical safety devices for protection of the shuttle box and picking mechanism.

tween these two parts at this point of a maximum of one-eighth to a minimum of 1/16th of an inch. This adjustment is made by turning the eccentric pin in the crank arm or replacing the crank arm if it is excessively worn to a point where the eccentric pin will not draw the lay far enough forward.

Next, check the position of the shuttle in relation to the transfer mechanism. With the shuttle in the battery end of loom and the transfer mechanism indicating a transfer, the fixer should move the lay forward by hand until the bunter makes contact with the latch finger, then move the lay to exact front center position. When the lay is in this position there should be a maximum of one-eighth to a minimum of 1/16th of an inch between the transfer hammer and the rings on the bobbin.

At this point he should check the position of the shuttle in the shuttle box to determine if it is in the correct position to receive the bobbin properly on the transfer. If the shuttle is going too deep in the box, allowing the butt end of the bobbin to contact the shuttle spring slide, he should examine the lay end strap and the picker. If the strap is out of the lay he should replace it, and if the picker is excessively worn it should be replaced, because either one of these things will allow the shuttle to go too deep. But if the strap and the picker are both in good shape he should move the lay to the correct position to place it in the proper position. If the shuttle is going too deep in the shuttle box it will interfere with the orderly transfer of the bobbin and cause the bobbin to become trapped sometimes.

Next, he should check the transfer mechanism all the way through from the filling feeler to the transfer hammer, including the bunter. The transfer mechanism includes a number of parts, and if any of these parts is a little loose or excessively worn it will sometimes prevent the transfer mechanism from being drawn into the correct position for an orderly transfer. In this event false or faulty transfers will result, and this will sometimes cause the bobbin to be trapped. When the transfer mechanism is in position indicating a transfer the shuttle feeler should be held rigidly in position without any play, backward and forward, as this will sometimes cause faulty transfers of the bobbin. With the shuttle in the battery end of loom, and transfer mechanism indicating a transfer the fixer should be sure to check the thread cutter knives to determine if they are clearing the front box plate and the front wall of the shuttle. If the knives strike the box plate or the shuttle it will sometimes cause faulty transfer of the bobbin.

Put the loom in operation and check the tension on the cloth. If the cloth is too tight or too slack it will sometimes interfere with the boxing of the shuttle, prevent the shuttle from being in proper position for transfer, and trapped bobbins will result. Also if the tension on the cloth is too tight or too slack it will affect the face, or cover of the woven fabric adversely.

Next, with the loom in operation he should check the boxing of the shuttle in both ends of the loom. Improper shuttle boxing causes the weaver and the loom fixer more trouble than most anything else that can happen to a loom, because there are so many thing which work automatically that are dependent on the correct boxing of the shuttle, and there are so many things that can affect the boxing of the shuttle. If the shuttle is not boxing properly in both ends of the loom it will sometimes fail to be in proper position to receive the bobbin on the transfer and trapped bobbins will be the result. If the shuttle fails to box properly in one end of the loom it can affect the boxing in the opposite end, because if the shuttle fails to go all the way up in the box or bounces when it goes all the way in it will reduce the power on the pick and affect the boxing in the opposite shuttle box.

The primary purpose of these articles is to help loom fixers to become better technicians by learning how to take advantage of their work, and do their work with a minimum loss of time. In order to do this it is necessary to mention the supervisor in connection with this work, because the supervisor has the responsibility of training and helping the fixers to become efficient workmen. If the supervisor does not see to it that the fixers are given the proper training there certainly will not be many good loom fixers. The most important thing that the supervisor can do in helping his men to become superior loom fixers is to teach them the importance of keeping the shuttles boxed properly. The best way he can do this is to make the fixers realize the importance of this phase of their work, and then teach them the proper way to do the job. When a loom fixer knows how to box a shuttle, and learns the many things that will affect the boxing of the shuttle he will have the most vitally important basic fundamental in loom fixing.

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Automatic Temperature Control Of Washing, Scouring And Bleaching

By LEO WALTER, Consulting Engineer

TEXTILE washing machines are made in various types and for a multitude of purposes, such as soaping, desoaping, washing off, de-sizing, etc. Thermostatic control of bath temperature is applied similar to other finishing immersion operations. Whether automatic control is applicable with advantage to wool washing tanks depends partly on working conditions, partly on machine designs and capacity of the tank. Accurate temperature control of very small vessels is always more difficult, because vigorous rate of heat input favors overheating of small liquid volumes. Steam pressures encountered for wool-washing bowls vary, but 80/90 p.s.i. are often used and water temperatures to be controlled range between 100° and 130° F. *(Fig. 1).*

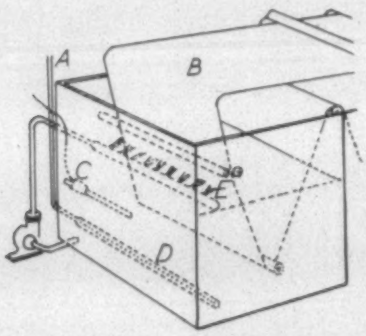

Fig. 1—Automatic control of wool washing and scouring vat. A, steam supply; B, cloth; C, thermostat bulb immersed in liquor; D, perforated steam pipe; E, water jets.

In one particular instance the cross-sections of three tanks were alike, three feet wide by two feet deep for the water filling, but the length varied from 18 feet to 15 feet and 11 feet. The working method was to fill the three initial tanks every morning from the storage tank and water temperatures for filling varied from 60° to 100° F. during the day. This was a distinct detrimental point, but by fitting a steam coil with temperature regulator to the main hot water storage tank, a steady filling temperature was achieved. To keep the water during the day at the desired 120° F., steam coils near the bottom of each tank were fed through 1¼-inch pipes direct from the boiler.

Heat losses of each bowl to be made up were: (a) heat emanation from liquor surface; (b) losses through radiation from bottom; (c) losses from water absorbed from material during washing; and (d) splash water and drained water, the volume of which is usually small. Calculations for the largest tank having 6,700-pound capacity gave approximately 390 pounds of steam/hour at 80 p.s.i. to keep the volume at 120° F. A three-quarter-inch size control valve, fitted in a by-pass for semi-automatic control, keeps the bath temperature steady. In this case, liquor temperature of 130° F. is critical and must never be exceeded.

The temperatures of the soda solution for wool washing may be 45° C. in the first bowl. Over-temperature would badly cause "hardening," while under-temperature would badly influence washing-off the natural grease. The second bowl might have 30° C., but whether temperature control should be applied for it depends on general working conditions. Whether on/off control or gradual control mode should be applied depends on the size of the vessel, steam pressure, required accuracy of control and other factors. Very high steam pressures and direct injection might cause splashing of the liquor, when the control valve opens suddenly full bore, with on/off mode. *(Fig. 2).*

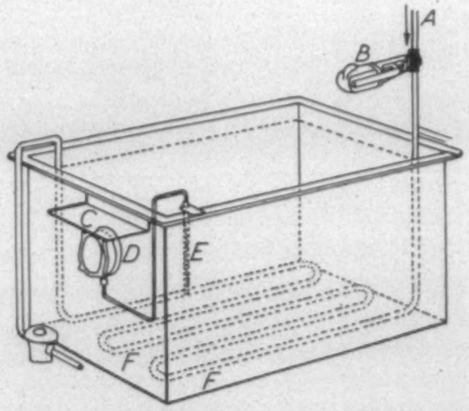

Fig. 2—Immersion thermostat switch and motorized steam control valve for vat control. A, steam supply pipe; B, motorized control valve; C, splash guard; D, thermostat head; E, thermostat bulb; F, steam heating coil.

Control of Scouring Temperature

Scouring involves the use of liquor at a definite temperature, whichever method of scouring is used and whether loose material, hanks or cloth is treated. Beam scouring, package scouring of cones, bobbins or cheeses, combined milling and scouring of cloth, or combined scouring and dyeing of yarns in the same package machine present more or less similar temperature control problems.

Temperataure control of continuous working machines for loose wool, consisting of one or more iron tanks with

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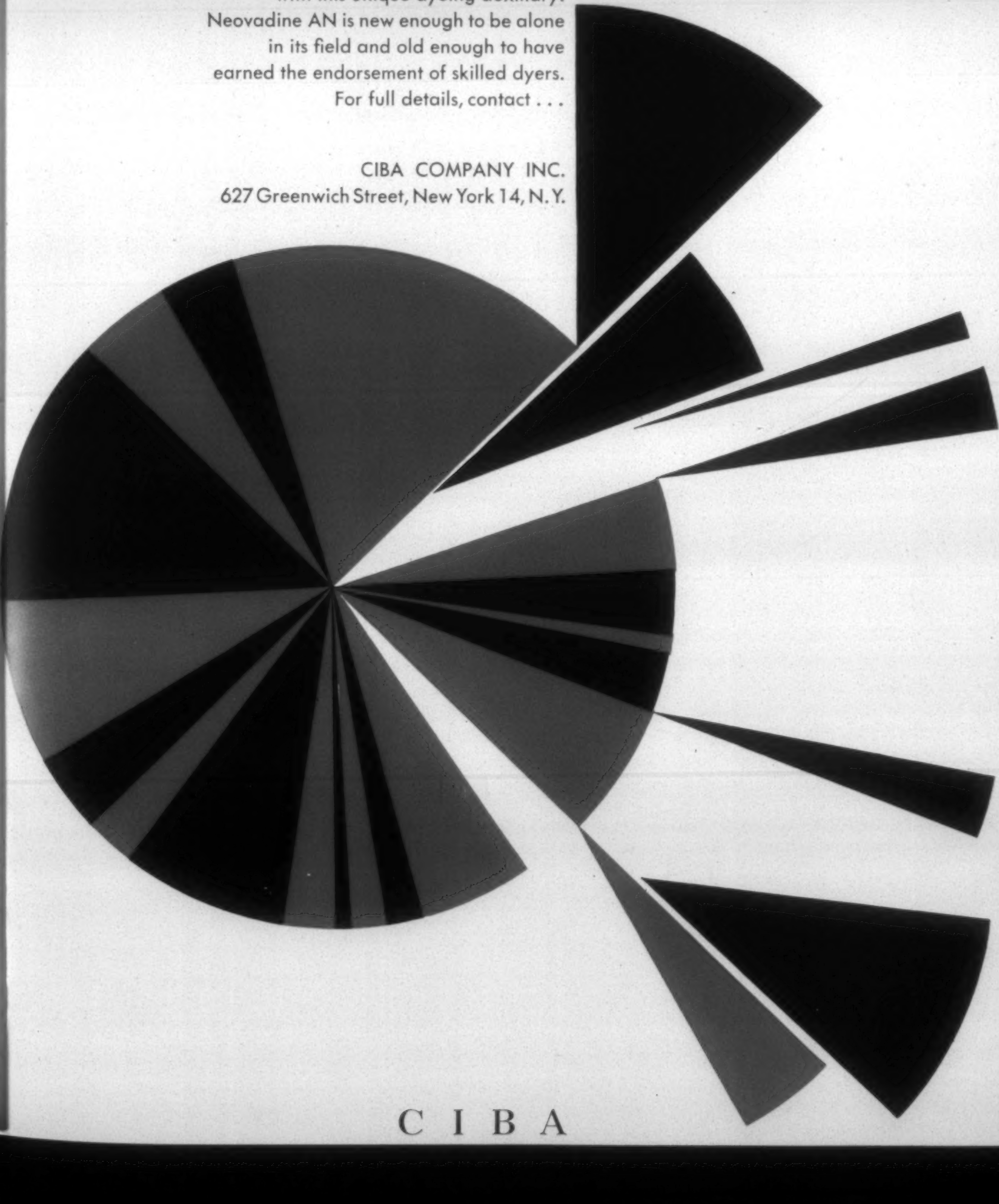

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false bottoms, is a fairly easy matter. The thermostat bulb has to be inserted into the tank, where it is out of the way from mechanical damage, but remains fully immersed, and subjected to the average liquor temperature. The steam control valve is fitted in a by-pass of the steam supply to each bowl, similar to wash bowls, and works preferably on gradual control mode. Mild steel or stainless steel thermostat bulbs have to be used with regard to the hot alkaline liquor, or alternatively pockets made from mild steel, or stainless steel can be applied, although they add to controller time lags and to costs. Each scouring bowl is usually fitted with a side settling tank to take the dirty water squeezed out by press rollers above the bowl. The Harrow type uses 120°, 115°, 110° F. or similar temperatures in the four bowls. Other machines have one or two "rake" bowls and three or two harrow bowls, respectively, but thermostatic control is similar for steam admission, as shown in *Fig. 3*. A self-actuated temperature regulator is shown, but pneumatic instruments are also applied. The turbulence of the liquor as required for efficient scouring, is favorable for close control. By inserting the thermostat bulb where movement of liquor is present, average temperature control is secured.

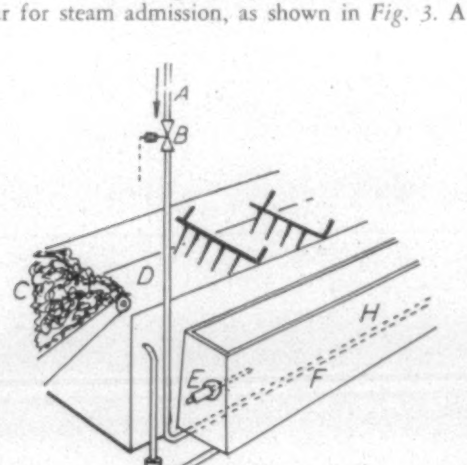

Fig. 3—Thermostatic control of loose wool scouring machine. A, steam supply; B, control valve; C, loose material; D, first bowl; E, thermostat bulb in settling tank; F, perforated steam pipe; G, circulation pump; H, settling tank for bowl.

It is important in wool scouring machines that the cleanser be maintained hot enough to secure the desired results, but when left uncontrolled there is much waste of steam. Steam control of hank scouring machines, consisting of a rectangular tank with circulation pump, and a movable framework with rods taking the skeins is again a straightforward control problem. The thermostat bulb might be placed into the vat, or perhaps sometimes into an enlarged knee or "T" piece of the circulation pipe from the pump to the vat. *(Fig. 4)*.

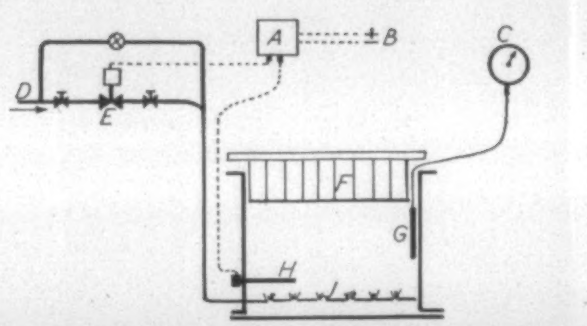

Fig. 4—Control of hank scouring machine with rake suspension. A, control mechanism; B, electric mains; C, thermometer; D, steam supply; E, steam control valve; F, rake mechanism for moving hanks; G, thermometer bulb; H, thermostat bulb inserted through side wall.

Piece Scouring

Scouring a piece cloth in woolen mills offers good opportunity for thermostatic control of solutions in scouring bowls. Simple testing of hot water temperature, produced by direct admixture of steam to the bath by the foreman in charge might or might not produce the desired bath temperature. To read temperatures at short intervals in the scouring bowls, to watch sud temperatures, and to adjust steam valves for correct steam admission is a big job. If efficiently performed, it is obvious that automatic control eliminates the vagaries of the "human element" from maintaining scouring temperature. It depends, however, very much on the method of water heating, whether simpler thermostats are applicable, to check overheating with desirable accuracy, and the use of more elaborate controllers is not always justifiable because of higher first cost. In calculating the steam consumption of piece scouring machines, the water consumption should be known, because the latter varies according to the methods used and the skill of the operator, and a rate of flow through a machine might be from 10,000 to 15,000 gallons per hour.

In general, a scouring operation is finished after 45 minutes, which enables one to arrive at an approximate figure for water consumption. By filling a range of scouring machines with blended water at constant temperature, savings in water and steam can be achieved. The most widely used method of changing over suddenly from hot to cold water supply to the spare pipe tends to set any soap solution that may remain in the cloth, or to set creases in the cloth due to sudden shrinking (heat creases).

The diagrammatic layout of an actual installation where a single temperature is applicable is shown in *Fig. 5*. This controls the hot water supply tank at 210° F. by means of a 1½-inch control valve for 40 p.s.i. steam pressure. The old hot water storage tank, which was too small for peak loads, was replaced by a larger vessel together with a break tank for the cold from the mains. A two-inch thermostatic three-way blender supplies blended water at 160°

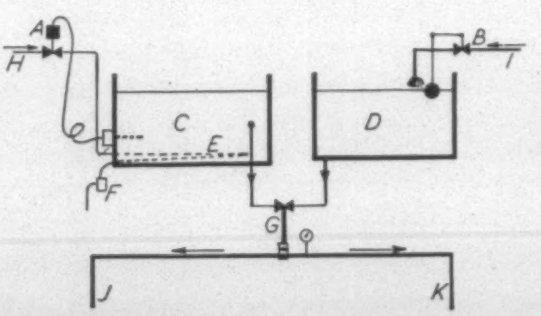

Fig. 5—Thermostatic blender used for filling of scouring machines with blended water at correct temperature. A, steam control valve; B, float valve; C, hot water storage tank; D, cold water storage; E, steam heating coil; F, steam trap; G, thermostatic hot and cold water blender; H, steam supply; J and K, blended water for filling scourers.

F. The process uses three static fillings, but the temperature has to be adjustable for various types of piece goods. Another larger installation uses a similar four-inch thermostatic blending valve with a ten-foot heat supply pressure.

Piece Scouring and Washing

For combined piece-scourers and wash-off machines, the thermostatic bulb is preferably inserted through the side wall of the vat, and the steam control valve has to be fitted in the usual way in the steam supply pipe. Various layouts are possible, however, for combined milling and scouring machines. For example, a hot and cold water mixing valve or blender, or a steam and water mixer can be used to fill the machine with water at the required temperature, and a temperature regulator controls steam admission in order to keep liquor temperature during milling and scouring steady. The thermostat bulb can either be clipped to the inside of the trough, or inserted horizontally through the side wall.

Rope scouring in dolly scourers can be similarly performed at controlled solution temperatures of about 100° F. or as required. Open width scouring with pump and sprays for wool cloth can also use a bulb immersed in the solution at the bottom of the smaller trough or in the spray pipe. It depends, of course, on the size of machine and the working conditions, whether hand control should be replaced by thermostatic control, or whether the savings are not worth it. Fitting of automatic control on scouring or combined machines may or may not be justified from the fuel and steam saving point of view, but either improved quality or uniformity of the scouring operation itself might be an inducement to apply instruments rather than to rely on the operator.

Electrically-operated controllers are also applied for steam control of vessels in finishing, having a thermostat switch with remote thermostat bulb fitted vertically into a tank, which latter is heated indirectly by means of a steam coil. A motorized steam control valve is actuated from the thermostat, and closes the steam supply, after the desired temperature (set point) has been reached. A certain temperature differential is allowed for the liquor temperature to drop, after which the switch opens the control valve again.

Continuous Washing Machines

The advantages of a continuous method of scouring, as opposed to the usual batch operation, have produced modern continuous washing machines, whereby a range is applied for performing actual scouring and washing-off, after which follows squeezing, hydro-extracting and drying. The use of hydro-exhausters makes the process continuous, and various suction machines are available. Automatic temperature control is recommendable for vessels, where warm or hot water or liquid is used, and the full advantages of a fully automatically controlled continuous process is obvious. *(Fig. 6)*.

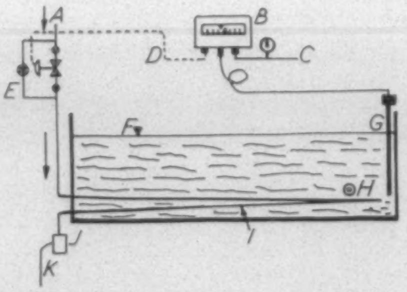

Fig. 6—Pneumatically-operated indicator controller for washing bowl temperature. A, steam supply; B, pneumatic indicator-controller for washwater temperature; C, compressed air supply to control mechanism; D, air branch line to control valve; E, bypass; F, liquor level; G, thermostat bulb; H, alternative position for thermostat bulb through side wall; I, coil; K, steam trap.

The writer would like to mention the considerable saving of steam and fuel which should be taken into account when considering installation of temperature regulators for washing, rinsing and scouring, which together with achievable uniform top quality will pay for this economical investment. Close co-operation between the textile engineer and the instrument specialist will produce the right solution for each control problem.

Bleaching Control

The result of any bleaching operation depends on length and intensity of the boil. Excessive pressure in kiers might damage fibers, and so will overlong boiling. The main advantage of automatic kier control is, however, uniform repetition of processes for the same type of manufactured goods. Time for heating up, time of boil, temperature, pressure, circulation of liquor, pH and chemical and physical factors influence the result and have to be measured and controlled. Bleaching operations range from very simple operations in vats to continuous bleaching and to kier bleaching under pressure, or to peroxide bleaching, and it is only possible to give a few typical examples for automatic control. *Fig.* 7 illustrates a rotating yarn machine for combined cleaning, bleaching and dyeing, using a self-actuated regulator. Various layouts of working conditions may call for pneumatic-type controllers.

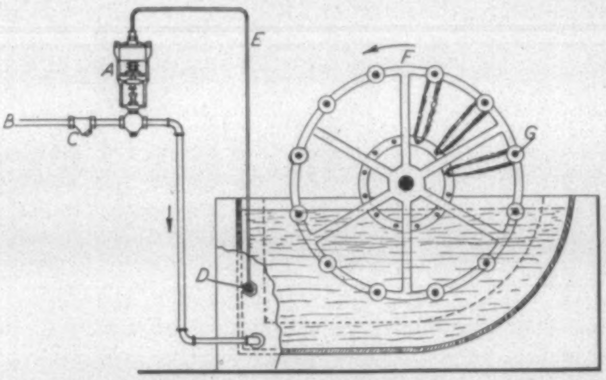

Fig. 7—Rotating yarn cleaning, bleaching and dyeing machine with temperature control. A, steam control valve; B, steam supply; C, pipeline strainer; D, thermostat bulb inserted through side wall; E, capillary tubing; F, rotating wheels for hank suspension rods.

Position of the thermostat for pressure kiers will be preferably in the outflow pipe for the heater, i.e., obtaining impulses from the heated spray water temperature flowing into the vessel. The kier-type with steam injector uses a similar layout, but is a little more difficult to control due to lack of storage volume of hot water, as in the shell heater type, and pneumatic control seems advisable for this type. Automatic steam control of the high pressure type is similar to control of the open type, and for both the vertical and horizontal kiers the recommended bulb position is in the outflow pipe from the shell heater.

Controllability of kiers using shell-type heaters will be somewhat improved by using larger heaters—for example, storage types instead of the instantaneous types, which make very close control rather difficult. An alternative bulb position is in the pressure kiers themselves beneath the false bottom, but this location necessitates the provision of a suitable threaded boss in the kier shell, and requires special thermostat bulbs. Where working conditions demand pneumatic controller types, it is preferable to use a reverse acting diaphragm control valve, i.e., opening with rise of pressure in the air branch line from the controller mechanism. In the event of air failure the control valve will be shut off tight, and by adjusting the isolating valve, hand control is applicable. The use of recorder-controllers has the advantage of producing chart records for each batch, giving a complete picture of each boil, with time of boiling, heating up time and idle periods, but some users prefer non-indicating regulators, and fitting of an independent temperature recorder for checking controller performance at the same time as taking temperature records.

Continuous peroxide bleaching plants lend themselves readily to fully automatic control. These continuous ranges depend for their successful operation to a great extent on accurate control of the various process factors. The drive of the sections of the plant must be synchronized. Squeezing between the stages requires control by means of pneumatically-loaded squeezing rollers, which is essential to insure uniformity throughout a given period of running. Temperatures have to be closely controlled. Checking of cloth speed is performed by tachometers fitted on the saturator bowls. A steam flow meter is installed in the steam mains to provide the basis for costing.

Temperature control of washer water is performed by electronic recorder-controllers on steam supplies to washers, saturators and storage boxes, respectively. Special thermostat bulbs or pockets have to be used for the caustic and peroxide solutions in the saturators, and also for steam chest control of the storage boxes. Level control in each saturator is performed by a head meter with pneumatic control mechanism, using the air bubble principle with dip tube as impulse. Liquid level is thus maintained by throttling or closing inflow of water. Pneumatic control is, of course, also applicable for continuous bleaching operations,, using air-relay operated mechanism.

Maintenance, Engineering & Handling

Electrical Braking of A. C. Motors In The Textile Industry

By J. C. MAROUS, Westinghouse Electric Corp., Charlotte, N. C.

This article describes some of the applications to which electrical braking of a.c. motors has been applied in the textile industry. It is an excerpt from a paper delivered by Mr. Marous at the past A.I.E.E. conference on electrical equipment for the textile industry.

OVER the past two years, d.c. braking has been successfully applied to several hundred spinning frame motors. These spinning frames formerly used a mechanical brake to prevent kinking of the yarn when the frame was stopped. While the mechanical brake was once used exclusively on spinning frames, every mill that has switched to d.c. braking of a.c. motors has found it much more satisfactory for this application. Some of the reasons why these mills prefer d.c. braking over mechanical braking are as follows:

(1) d.c. braking provides a constant degree of braking on every stop without any adjustments. The mechanical brake is affected by temperature, moisture, oil, humidity and wear thus requiring frequent adjustment to maintain a constant degree of braking. The electrical brake is not affected by any of these factors and thus provides a consistant stop at all times. This is a big plus feature for d.c. braking of a.c. motors.

(2) The maintenance cost on a d.c. braking controller is negligible compared to a mechanical brake. One mill now using a DynAC controller estimated the increased maintenance cost of a mechanical brake over a d.c. braking controller to amount to approximately $1,000 per year per 100 spinning frames. In addition, the maintenance on a mechanical brake requires a lengthy down-time thereby reducing the output production.

(3) d.c. braking does not "grab" near zero speed as is true of the mechanical brake. Since the torque with d.c. braking drops off gradually near zero speed, it provides a cushion stop thus eliminating even the slightest kink in the yarn.

(4) d.c. braking reduces the total power cost. At one mill it was found that the solenoids used on the mechanical brake required 231 watts at a power factor of 60 per cent. These solenoids were energized continuously. Based on 100 frames operating 24 hours a day, the power costs amount to approximately $2,000 per year. The only power involved with the d.c. braking controller is that used in energizing the braking transformer. This amounts to 21 watts which is

negligible compared to the 231 watts required to energize the solenoid.

Another mill, now using a d.c. braking controller, has discovered that the mechanical brake had been "dragging" and increased the power cost approximately ten per cent. While this is not true of all mechanical brakes, it is quite possible for the brake to be "dragging" for sometime before it is discovered. This problem does not exist when the motor is braked electrically.

(5) Another feature that every master mechanic and plant electrician should like about d.c. braking is the fact that the degree of braking is easily adjusted over a wide range. This adjustment merely involves changing one lead of the transformer on a terminal as shown in the schematic diagram of Fig. (1). All of the individual braking controllers applied to spinning frames are identical to that shown.

The braking torque required on a spinning frame is relatively low. If the braking torque is increased and the frame stopped too quickly, the tapes on the frame will be thrown off. The d.c. braking volts required to produce this braking torque vary with different motors, but usually range from 60 to 70 volts.

Group dynamic braking has recently been introduced for spinning frames which materially reduces the initial cost of the controller. This is especially true on existing installations where an a.c. starter is already available. With group d.c. braking, several spinning frames can be braked from one controller. Controllers are presently in service where four or six spinning frames are braked from one controller. All the parts are mounted in one cabinet. The controller can be mounted between spinning frames, on the wall or overhead.

A typical schematic diagram of such a controller is shown in Fig. (2). This circuit employs a synchronous motor timer which produces a time delay after it is energized. As can be noted from the diagram, this controller was designed to make use of the existing a.c. starter and is therefore not included in the circuit. Where an a.c. starter is available, it is desirable to use it to further reduce the cost. This system, where a single transformer and rectifier are used to control a group of frames rather than just one, results in a sizable savings in the initial cost of the controller. Where two spinning frames are braked from one controller rather than individual controllers, a 33 per cent savings in initial cost can be realized. A four-unit controller reduces the initial cost by approximately 50 per cent and a six-unit controller reduces the cost about 55 per cent as compared to individual controllers. One mill presently using this system expects to save several thousand dollars per 100 spinning frames over the mechanical brake using the solenoid mentioned above.

Group braking is particularly suited to spinning frames since the interval between stops is long. It is very unlikely that two frames will be stopped within the eight-second stopping interval. Should the unlikely happen and two frames are stopped at the same instant, the braking time will exceed eight seconds slightly due to the reduction in braking voltage caused by the regulation of the controller. Because of this light-duty cycle, the components can be de-rated for intermittent duty which results in a savings in the initial cost. Each application should be checked, however. For example, a spinning frame producing filling yarn will be stopped about five times as often as a spinning frame producing warp yarns, which increases the duty cycle requirements. The main component to be selected based on the duty cycle is the rectifier.

Warpers

While modern warpers use a d.c. drive, the majority of

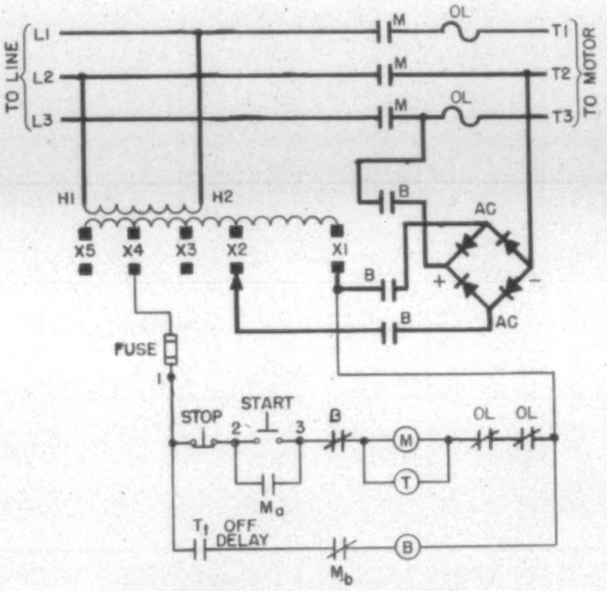

Fig. 1—Individual braking controller.

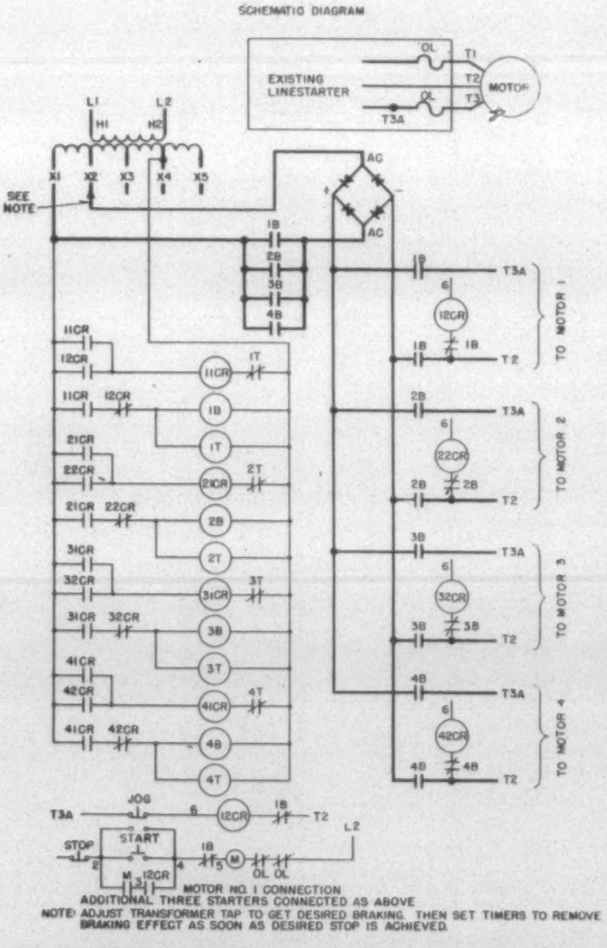

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Fig. 2—Schematic diagram of controller for braking several spinning frames.

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the warpers in service today are driven by an a.c. motor. These motors require a brake which can stop the warper smoothly and quickly whenever an end is broken to prevent the end from being wound over and lost on the beam. d.c. braking is favored for warpers mainly because of the consistent degree of braking without periodic adjustments and the elimination of the costly maintenance previously needed on the mechanical brake. Overrun of the yarn is also held to a minimum.

Cloth Inspection Frames

The inspection frame is driven by a small a.c. motor. Whenever a minor defect such as loose ends or knots are noticed the motor is stopped to more carefully inspect the cloth and to correct the defects. Many of these frames are stopped by mechanical brakes. To eliminate the disadvantages of these brakes, d.c. braking is being applied to these frames. The operators are particularly pleased with the d.c. brake because the same degree of braking is obtained on every stop. This feature is very desirable since the frame must always be stopped within a given time to prevent the portion of the cloth with a defect from passing over the light-box and being wound on the roll. If this happens, it is necessary to unwind the cloth. As mechanical brakes wear, the degree of braking is reduced and the above condition results. The maintenance people like the electrical brake because of the little maintenance required.

Shear Drives

The braking duty on a shear drive is more severe than most textile applications. On a shear drive, cloth is passed under four shearing blades to clip the nap to a smooth surface. Whenever a cloth seam is about to pass under these blades, it is necessary to stop the blades until the seam passes the last blade at which time the blades must be restarted to continue the shearing process. If the blades are not stopped, they will cut the seam. The shearing blades are driven by four one-horsepower a.c. motors. A sketch of the process is shown in Fig. (3). The seam is detected by a trip switch as shown. After a seam is detected, the blades must be stopped before it travels four feet and restarted after it travels nine feet. With cloth traveling about 112 yards per minute, the blades must be stopped in 0.714 seconds and restarted in 1.61 seconds.

To make the stopping cycle even more severe, it must be capable of performing the above function every 50 seconds. At one installation, the four shearing blade motors were plugged to stop. However, the losses in the motor were so

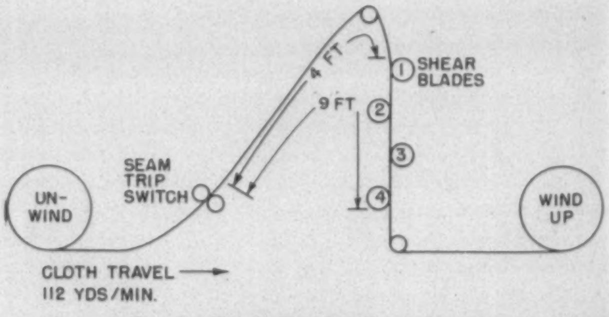


Fig. 3—Sketch of shear drive process.

great that frequent motor burn-outs resulted. The application was investigated with the intention of using d.c. braking. As previously mentioned, the losses with d.c. braking are less than that encountered when plugging a motor to a stop.

It was determined that to stop all four motors in parallel in 0.714 seconds, a braking current of 32 amperes or 425 per cent of total full-load current was needed. This current produces an average braking torque of 175 per cent and a peak braking torque of 600 per cent, which was not excessive from a motor standpoint. The automatic stopping and restarting was then accomplished by means of two pneumatic time delay relays. This braking scheme was then used to replace plugging the motors to a stop. The controller has now been in service over a year and has performed without any motor burn-outs or any maintenance of any kind. During this same length of time, the motors had previously been rewound twice when plug stopping was used.

Conclusions

In addition to the above applications, d.c. braking is being used on lap winders and in conjunction with electrical stop motions for roving frames. It is also being used on folders and will perform very satisfactorily on drawing frames. While twisters normally do not have brakes, a d.c. braking controller when tested on a twister brought the unit to a smooth stop without any kinks in the yarn.

d.c. braking can be used to brake any three-phase a.c. motor and provide a quick smooth, consistent stop which is adjustable, and with very little maintenance needed. One user stated, after considerable experience with d.c. braking, that "it is the modern way to stop an a.c. motor."

Window Block Installation Saves Money

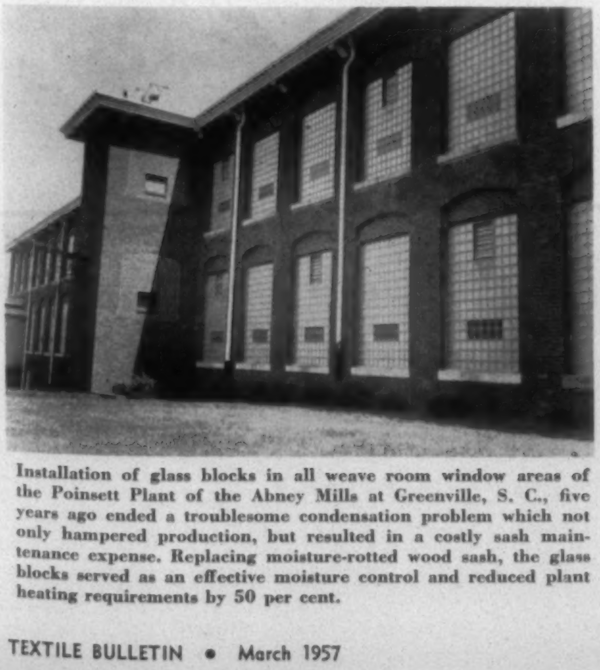
REPLACEMENT of moisture-rotted wood sash and their conventional flat glass window lights with glass blocks five years ago solved a troublesome and damaging condensation and window maintenance problem in the Poinsett Plant of Abney Mills at Greenville, S. C.

Mortared into place to become an integral part of the mill wall, the glass blocks offered an insulating value almost equivalent to that of the wall itself. As a result, according to company officials, moisture which had previously formed on the flat glass windows, rotting the sash, has been practically eliminated. Light directing blocks produced by Pittsburgh Corning Corp. were used in the installation.

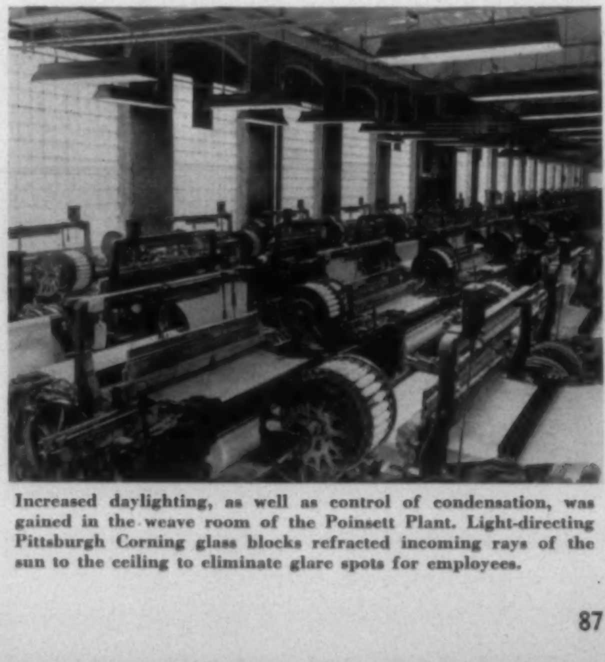
Previously, the company said, condensation was so severe at times that puddles would form on the floor to create a footing hazard. Excess moisture, almost a mist—which air conditioning could not overcome—would impair the operating efficiency of the machines. Frequent breakage of the warp or filling yarn would lower the quality of the product. Inspection costs mounted along with production costs.

In addition to correcting these problems, the eight-inch by eight-inch glass blocks also made possible a 50 per cent reduction in boiler requirements. Where two boilers were required to maintain the desired 80° temperature in the mill, only one is now operated. This unit is operated only on Monday mornings following the Sunday shut down. As soon as the mill temperature reaches the desired 80° level the heat is shut off; heat energy from the machines maintaining the desired temperature.

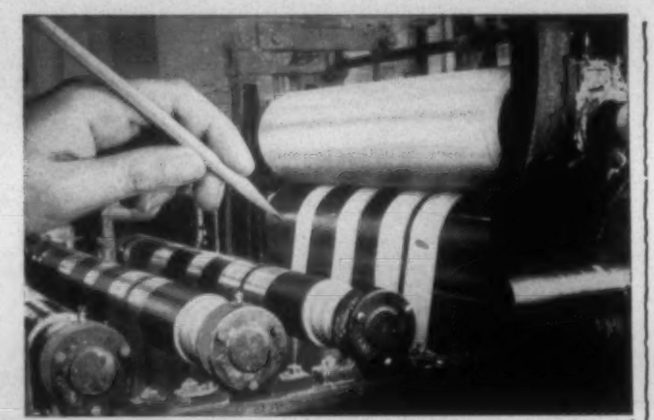
Window breakage, a frequent occurrance with flat glass, has been practically eliminated and window washing is now done with a spray hose.



Installation of glass blocks in all weave room window areas of the Poinsett Plant of the Abney Mills at Greenville, S. C., five years ago ended a troublesome condensation problem which not only hampered production, but resulted in a costly sash maintenance expense. Replacing moisture-rotted wood sash, the glass blocks served as an effective moisture control and reduced plant heating requirements by 50 per cent.



Increased daylighting, as well as control of condensation, was gained in the weave room of the Poinsett Plant. Light-directing Pittsburgh Corning glass blocks refracted incoming rays of the sun to the ceiling to eliminate glare spots for employees.



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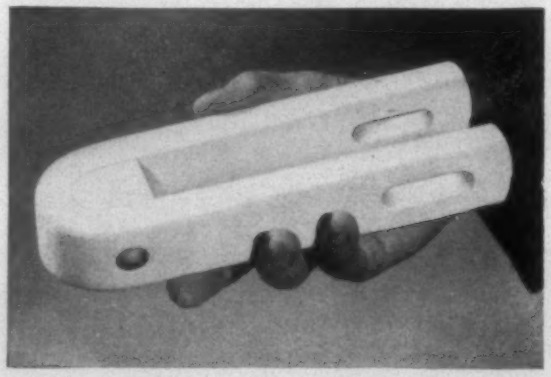

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PERSONAL NEWS

Peter C. Everett

Peter C. Everett has been named a representative of Whitinsville Spinning Ring Co., Whitinsville, Mass. Mr. Everett, who will make his headquarters at 369 Meadowbrook Drive N. E., Atlanta, will cover the states of Georgia, Alabama and Tennessee for the company. W. K. Shirley continues to represent the company in the Carolinas and Virginia from headquarters in Belmont, N. C.

L. K. Fitzgerald has joined the cotton merchandising division of J. P. Stevens & Co. in an executive capacity. His position will be one of liaison between the merchandising and production departments. Following graduation from Virginia Military Institute, Mr. Fitzgerald joined Dan River Mills, Danville, Va., where he held many executive positions—including manager of the Riverside Division, research manager and general superintendent. In 1955 he left Dan River to join Burlington Industries as area manufacturing executive. He was formerly a director of the Textile Research Institute, Princeton, N. J.

Daniel L. Worth has joined the research staff of Alco Oil & Chemical Corp., Philadelphia, Pa. Formerly a textile chemist for The Chemstrand Corp., Decatur, Ala., Mr. Worth joins Alco to take up research work on problems of warp sizing. He is a chemical engineering graduate of Georgia, and is a member of the American Association of Textile Chemists & Colorists.

Fred J. Emmerich and Glen B. Miller have been appointed chairman of the board and president, respectively, of Allied Chemical & Dye Corp. Mr. Emmerich, president of the firm since July 1946, has been with the company for more than 36 years. Mr. Miller has been a vice-president of the company since 1950, and a director and member of the executive committee since 1953. His service with the company began in what is now the Buffalo, N. Y., plant of the National Aniline Division. As president, he will be chief executive officer of the company . . . Other recent company appointments include those of Carlton Bates, Frank L. Linton and James Sheridan as vice-presidents. I. H. Munro has been named president of the company's Solvay Process Division. Mr. Bates was formerly president and Mr. Munro vice-president of Solvay. Mr. Linton, now controller of the company, and Mr. Sheridan, its treasurer and also president of Allied Chemical International Division, will continue to hold these offices.

Roy D. Wiggins has been appointed to the research and development section of the textile division, The Hilton-Davis Chemical Co., Cincinnati, Ohio. Mr. Wiggins' appointment continues a program begun several years ago by Hilton-Davis of expanding its service facilities to the textile industry. His principal duties consist of determining the practical applications of new dyestuffs before the products are marketed. After testing the experimental dyestuffs under laboratory conditions, their performance is studied in textile mills. Prior to joining Hilton-Davis, Mr. Wiggins was associated with Kendall Mills in Slatersville, R. I., and Bethune, S. C., and with the Rock Hill (S. C.) Printing and Finishing Co. He received a B.S. degree in chemistry at Clemson College.

Robert Hodges has been named office manager and controller of Moretex Chemical Products Inc., Spartanburg, S. C. For the past ten years, Mr. Hodges has been with Reeves Bros. Inc. in various capacities . . . . Oliver Goldstein has been shifted from plant manager to technical assistant to the sales manager. His duties in the new post will be in field development and new products . . . Donald Davis has been named plant superintendent in charge of plant operations.

Oliver Goldstein

Robert Hodges

Dr. Thomas H. Swan, a chemist with wide experience in textile and elastomer research, has joined the staff of the Southern Utilization Research Branch of the Agricultural Research Service, U.S.D.A. He is stationed at the Southern Regional Research Laboratory in New Orleans, La., and has been named assistant head of the cotton fiber section. Dr. Swan was formerly assistant chief of the research and development division of the Office of Synthetic Rubber, in which capacity he was responsible under the chief for the activities of five branches. Prior to that he was a research chemist on the staff of Mellon Institute, Pittsburgh, Pa., where he carried on investigations in the fields of textiles, synthetic resins and fabric laminations and was responsible for the work that led to a basic patent on the "fused" collar. In his work at the Southern Utilization Research Branch, Dr. Swan is returning to textile investigations, as the cotton fiber section is engaged in studies of the fundamental properties of the cotton fiber. A native of Monmouth, Ill., he received a B.S. degree from the University of Mississippi, a Master's from Columbia, and a Ph.D. in chemistry from Ohio State.

John A. Robertshaw Jr. has been elected a vice-president of Robertshaw-Fulton Controls Co. Mr. Robertshaw, a grandson of one of the founders, has been associated with Robertshaw since his school days, working in plant and office jobs during off hours and vacations. He has been in charge of foreign operations since 1952, and was made an assistant vice-president in 1954.

Bernard F. Bertland has been appointed to the newly-created post of director of advertising, merchandising and promotion for The Chemstrand Corp. In his new position, Mr. Bertland will direct the expanded advertising, merchandising and promotion programs for Acrilan acrylic fiber, Chemstrand nylon and Chem-nyle, a process developed by Chemstrand to improve the dyeing of nylon filament fabrics. He will also supervise all product information and publicity for the trade and consumer press as well as home economic and general consumer education projects it was pointed out. Mr. Bertland joined Chemstrand as merchandising manager in 1953. Prior to that he was public relations and advertising manager for William Skinner & Sons.

Transfer of Vincent P. Mahon, sales representative for the Lunkenheimer Co., Cincinnati, Ohio, valve manufacturer from Chicago to Houston, Tex., has been announced. Mr. Mahon, who replaces Tollie C. Venable as sales representative in the Houston territory, will cover that territory with Jack L. Green.

Andrew E. Buchanan Jr., general manager of Du Pont's textile fibers department, is to receive the 1957 honor award of the Commercial Chemical Development Association. The award, to be presented to Mr. Buchanan on March 28 at an association dinner in his honor at the Hotel Statler, New York, is presented annually for outstanding achievement in the field of commercial development. It goes to Mr. Buchanan for his leadership in commercializing Dacron polyester fiber. Dacron was introduced by Du Pont in 1950 as Fiber V and has been in commercial production only since March 1953. A native of Philadelphia, Pa., Mr. Buchanan is a graduate of Lehigh University, Bethlehem, Penn., where he received his bachelor's degree in chemical engineering in 1918. He joined Du Pont the same year and has served that company in numerous capacities since that time, with the exception of a 14-year interval with Lehigh University and with the editorial board of *Chemical and Metallurgical Engineering*.

Dr. Alfred E. Brown has been appointed director of research of Harris Research Laboratories Inc., Washington, D. C. Dr. Brown joined the laboratories in 1945, and has been assistant director for the past seven years. He has been most active in research and development activities involving textile and allied chemical fields. Harris Research Laboratories has recently been acquired by The Gillette Co. . . . the Washington Chapter of the American Institute of Chemists announces that its Honor Award for 1957 is to be presented to Dr. Milton Harris, director of research of The Gillette Co., at the annual banquet to be held on April 23 at the Windsor Park Hotel. Dr. Harris is being cited for his outstanding services in advancing the professional status of chemistry, and for his leadership in research in the chemistry of textiles and high polymers. As director of research of The Gillette Co., Dr. Harris co-ordinates the research activities of Gillette's divisions and subsidiaries here and abroad. He continues his connection with Harris Research Laboratories which he founded and has directed since 1945.

Charles F. Radley, one of the original directors of Oakite Products Inc., has retired from active duty as director of publicity and member of the company's board of directors. He is, however, continuing in the employ of the company as a consultant on advertising, public relations and general management policy. Employed in 1917 as editor of *Oakite News Service*, the firm's external publication, Mr. Radley was elected to the board of directors in 1926.

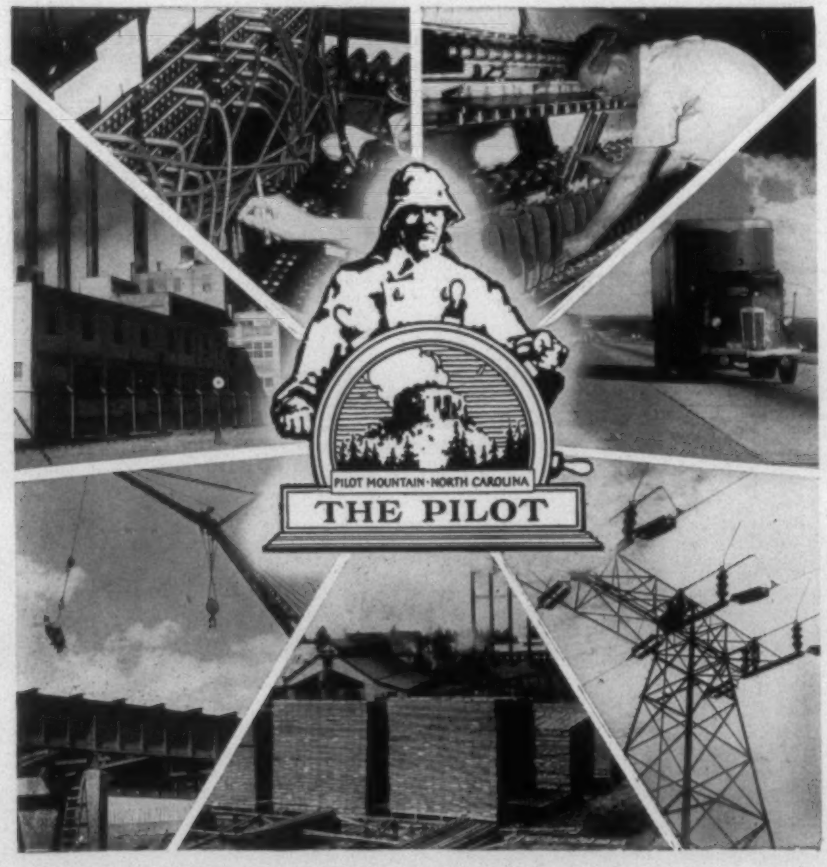
Frank L. Aultice, formerly overseer of spinning at the Lynchburg, (Va.) Division of Bates Industries Inc., has been appointed assistant superintendent . . . Woodrow W. Harris, former shift foreman of the filling spinning department, has been named general overseer of spinning . . . . John Davis, who was overseer of the No. 2 weave room, has been promoted to general overseer of the weaving department.

Michael Lombardo has joined Universal Winding Co.'s service department as a specialist in looms and weaving, and thus will be intimately associated with the company's installation of its new method of filling preparation—the Unifil Loom Winder. For the last seven years Mr. Lombardo was superintendent of weaving at Pepperell Mfg. Co., Fall River, Mass. For 16 years prior to holding this position, he was at various times overseer of weaving and slashing, general second hand and second hand. Prior to his 23 years at Pepperell, he was employed as a second hand in the weave room at Slater Mills, Webster, Mass.

Joseph J. T. Gleason has been appointed assistant sales manager of Reliable Sample Card Co. of New York City. Mr. Gleason brings to his new position a broad and widely known background of experience in the textile community of New York where he has specialized in the sales of sample cards for the past ten years.

I. Lewis Langley has been elected vice-president and a director of Bates Industries Inc. He will continue as vice-president of Windsor Industries Inc. (formerly Consolidated Textile Co. Inc.).

James A. Goldsmith Jr. has resigned as president of Hess, Goldsmith & Co., a member company of Burlington Industries, and Harry P. Goldsmith has been elected president, replacing him. Raymond F. Clark, vice-president, has been named executive vice-president and William F. Colton and James L. Eskridge, vice-presidents. All the officers are in New York except Mr. Eskridge, who makes his headquarters at Greensboro, N. C. James A. Goldsmith Jr. had been with the Hess, Goldsmith 32 years succeeding his father, the late



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James A. Goldsmith, as president in 1950. He will continue with the company in an executive capacity through the month of May. Harry P. Goldsmith, the new president, has been with the company since 1933 in varied manufacturing and merchandising capacities. He was formerly executive vice-president of the firm. Hess, Goldsmith became part of the Burlington Industries organization in February 1956.

Richard D. Wells has been appointed assistant director of Fabric Research Laboratories Inc., Dedham, Mass. Mr. Wells, a graduate of Harvard Engineering School, will serve in an administrative capacity on research and development projects. He has been with the Bates Mfg. Co. in Lewiston, Me., since 1946, where he has held the positions of director of quality control, director of research, and director of research and development. He is a trustee and member of the executive committee of the Textile Research Institute, Princeton, N. J., and a former chairman of the T.R.I. general research advisory committee. He is a member of the American Association of Textile Chemists & Colorists.

W. R. Steppe Jr.

W. R. Steppe Jr. has joined The American Thread Co. as assistant to W. D. Hurst, general manager of the firm's Georgia mills. A native of Spartanburg, S. C., Mr. Steppe will work on quality control, quality improvement and special projects. His previous experience includes several years with Saxon Cotton Mills, Spartanburg, and the past ten years with the Saco-Lowell Shops. With the latter he served as erector of machinery, serviceman and salesman. This experience included the erection of four complete mills, two of which were to be operated on synthetic fiber.

John C. Hughes of McCampbell & Co. Inc. has been elected chairman of the board of The Association of Cotton Textile Merchants of New York. He succeeds Marvin R. Cross of Greenwood Mills Inc. Mr. Hughes is also board chairman of his own firm, and former U. S. representative to the North Atlantic Treaty Organization (N.A.T.O.), with the rank of ambassador. . . . W. Ray Bell was re-elected president of the association; Herman D. Ruhm Jr., president of Burlington Industries Inc., was chosen vice-president; Ridley Watts, executive vice-president of Spartan Mills Inc. was re-elected treasurer; John L. Severance re-elected secretary; and Edwin F. Vandervoort re-elected assistant-treasurer.

Norman Case has recently been promoted to the position of assistant overseer of weave room No. 2, third shift, Joanna (S. C.) Cotton Mills Co. Mr. Case, who has been with Joanna 18 years, was formerly a section man.

Mrs. John Pope Abney, vice-president and a member of the board of directors of Abney Mills, Greenwood, S. C., has accepted an invitation to serve on the board

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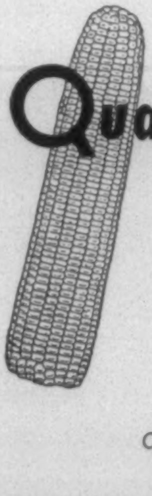

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of trustees of Converse College, Spartanburg, S. C. Mrs. Abney received a B.L. degree from the four-year liberal arts college for women in 1911.

John R. Thomas

John R. Thomas has been appointed works manager and plant superintendent of the Boston manufacturing operation of the H. F. Livermore Corp., manufacturer of loom parts. Mr. Thomas succeeds Baron H. Crowell who died suddenly last month. A native of Lewiston, Me., Mr. Thomas has for the past six years been associated with Harrington & Richardson, manufacturer of small arms, in Worcester, Mass.

Rupert C. Thompson Jr. has been elected president of Textron Inc. succeeding Royal Little who continues as chairman of the board. A banker, Mr. Thompson joined Textron in 1954. He had served as a director of the company from December 1946 to March 1949, and again became a director in 1955. He was elected vice-chairman of the executive committee in March 1956 and chairman of the committee in May 1956.

T. Lynwood Wilkey, formerly superintendent of spinning, Dixie Mercerizing Co., Chattanooga, Tenn., has been named superintendent of Globe Mills, Mount Holly, N. C.

R. D. Buie has resigned as superintendent of the Fayetteville (N. C.) Plant of Burlington Mills after 23 years with the company. Prior to assignment at Fayetteville, Mr. Buie had been with the firm at Newton, N. C., and Mooresville, N. C.

Andrew I. Lindblom, secretary and assistant treasurer of Drayton Mills, Spartanburg, S. C., has been named chairman of a new Education and Recreation Division for the Council of Spartanburg County.

Max Rice, president of Blair Mills, Belton, S. C., has been named to the Development Council of Furman University, Greenville, S. C. Mr. Rice is president of the Furman Alumni Assocation.

James A. Chapman Jr., vice-president of Inman (S. C.) Mills, and Stanley W. Converse, president of Clifton (S. C.) Mfg. Co., have been re-elected directors of the Spartanburg United Community Chest.

Albert S. Orr Jr. has been named superintendent of Eastern Mfg. Co., Selma, N. C.

Walter Glenn of Greenville, S. C., has been named superintendent of Amerotron Corp.'s Louise Plant at Charlotte, N. C.

H. E. Hornbuckle

Hal E. Hornbuckle has been designated service supervisor for the Foster Machine Co., working out of that firm's Charlotte, N. C. office. Mr. Hornbuckle has been associated with Foster since 1946. Formerly he was employed by the American & Efird Mills, and by Burlington Industries at Cramerton, N. C., where he gained practical experience in winding problems and the characteristics of winding devices.

Edward T. W. Galinat has been named manager of Rocky River Mills, Bigelow-Sanford's new yarn plant under construction at Calhoun Falls, S. C. Mr. Galinat was formerly general yarn and dye superintendent of the company's plant at Thompsonville, Conn. The new plant is expected to get into production sometime next Fall.

Frank C. Williams Jr. has resigned as superintendent of Plant No. 1, Roanoke Mills Co., Roanoke Rapids, N. C. Mr. Williams, son of the president and treasurer of Roanoke Mills Co. and Rosemary Mfg. Co., will join Springs Cotton Mills, Fort Mill, S. C., in the standards department.

Donald B. Tansill, president of M. Lowenstein & Sons Inc. has been named general chairman of the 1957 fund appeal of the Federation of Protestant Welfare Agencies. Mr. Tansill, a member of the organization's board of directors, has been active in fund raising campaigns since 1955.

B. J. Mallard has been named superintendent of The Borden Mfg. Co., Goldsboro, N. C., succeeding the late R. V. Blackwood.

Phillip S. McMullan, vice-president and treasurer of Edenton (N. C.) Cotton Mills, has been elected president of the firm to succeed the late John G. Wood. Mr. McMullan first joined the company as a bookkeeper 37 years ago, and has been serving a number of years as vice-president and treasurer. Elected vice-president was Dr. Frank Wood. Richard F. Elliott was re-elected secretary and assistant treasurer, a position he has held 35 years.

Raymond E. Kassar has been named president of Burlington Decorative Fabrics Associates, a member of the Burlington Industries. Mr. Kassar succeeds Walter Horne who is assuming a staff position with Burlington Industries. Mr. Kassar joined Burlington in 1948, becoming president of Burlington Narrow Fabrics Co. in 1956. . . . James S. Love Jr. has been named president of Burlington Narrow Fabrics to succeed Mr. Kassar. Mr. Love rejoined Burlington in 1955 as sales manager of the narrow fabrics operation after having been with Madison (N. C.) Throwing Co. and Ansonia Mills, East Taunton, Mass.

Earle Stall Jr., Cone Mills Corp., Greenville, S. C., has been named president of the Greenville Textile Club. He succeeds Odis Little, superintendent of the Monaghan Plant, J. P. Stevens & Co. Inc. Elected vice-president was Clyde L. Parham, superintendent of the Brandon Mill, Abney Mills, Greenville.

Roger H. Dickinson, manager of the Albany, Ga., plant of Coats & Clark Inc., has been awarded the Silver Beaver, one of the highest honors in boy scouting The award was given to Mr. Dickinson for "distinguished service to boyhood and the scouting movement."

A. D. Robinson, executive vice-president and Fred L. Howell, superintendent, Kerr Bleaching & Finishing Works, Concord, N. C., have been elected to the firm's board of directors. Mr. Robinson has been with Kerr for more than 11 years. Mr. Howell has been with the company 22 years and superintendent since 1947.

Leon P. Brick

Leon P. Brick has resigned as vice-president and sales manager of the textile division of Onyx Oil & Chemical Co., and has set up a new chemical company known as Intex Chemical Corp. The new firm will make its headquarters in Lodi, N. J., and is now completing organization of its research, technical service, production and sales staffs. Mr. Brick had been with Onyx 30 years. Prior to that he was with the Du Pont Co. A member of the board of trustees of the Philadelphia Textile Institute and chairman of its alumni fund drive, Mr. Brick also served as president of its Alumni Association in 1954-55. He is a member of the American Association of Textile Chemists & Colorists and the Textile Research Institute of Princeton, N. J.

Robert T. Davis Jr., vice-president and sales manager of Swift Spinning Mills, Columbus, Ga., has been named one of the

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five outstanding young men of Georgia for 1956. He was honored by the Georgia Junior Chamber of Commerce last month at a banquet in Valdosta.

George J. Waterfield has been appointed assistant treasurer of Curtis & Marble Machine Co., Worcester, Mass. Mr. Waterfield has been office manager for the firm since September 1955, and has been with the company since January 1938. He will continue with his present duties as office manager along with his new position.

H. Betts Wilson, assistant professor of textiles at Clemson College, is currently serving as a field representative between the textile industry of South Carolina and the Clemson College Textile School. This service was established at the suggestion of the advisory committee of the South Carolina Textile Manufacturers Association. A native of Abbeville, S. C., and a 1941 Clemson textile engineering graduate, Mr. Wilson will work to co-ordinate the industry's needs with the potential of Clemson textile students in all educational matters; to help the industry encourage more and better students to fill the growing demand for college-trained textile personnel; to establish practical Summer employment for Clemson textile students; and to co-ordinate the industry's research needs that can be met by Clemson College. A U. S. government inspector with the Philadelphia Quartermaster Corps for five years before joining the Clemson staff, Mr. Wilson is a member of the American Association of University Professors, the Southern Textile Association and the Clemson Chapter of Phi Psi, honorary professional society.

Thomas H. Huggins has been named manager of the newly-formed textile sales division of Markem Machine Co., Keene, N. H. He will be assisted by Leon Graves.

Philip E. MacLean, formerly New England district manager, has been named sales manager of the textile division of Onyx Oil & Chemical Co. He succeeds Leon P. Brick who resigned. Mr. MacLean has been with Onyx since he graduated from Lowell Tech in 1947. He has been district manager at Boston since 1949. He is a member of the American Association of Textile Chemists & Colorists.

V. C. McQuiddy Jr., has been appointed to the new post of sales manager of textile products for the textile division of United States Rubber Co. John H. Shaw has been named to succeed Mr. McQuiddy as yarn sales manager.

Earle S. Ebers, general sales manager of the Naugatuck Chemical division of United States Rubber Co., has been appointed assistant general manager of the division to succeed George R. Vila. Mr. Vila was recently elected vice-president and general manager of the division. Harold M. Parsekian, who was assistant general sales manager, has been named general sales manager.

Midge Wilson has been appointed assistant to Estelle M. Tennis, executive director of The Color Association of the United States Inc. Among other duties, Miss

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Wilson will assist in developing the association's expansion program to serve additional segments of industry. Miss Wilson was formerly merchandising promotion co-ordinator for *Seventeen* magazine, and prior to that, fashion co-ordinator for B. Blumenthal & Co.

OBITUARIES

James Allison Cooper, 62, former president of Harriet Cotton Mills and Henderson Cotton Mills, Henderson, N. C., died last month in Henderson. Mr. Cooper was president of the firm from 1941 until his retirement in March 1955. From 1926 to 1941, he was secretary, and from 1920 to 1926 he was a member of the board and finance committee. He was a son of the late David Young Cooper, founder of the two mills. Survivors include his widow, a son and a sister.

William Fraser, 77, retired treasurer and a director of J. P. Stevens & Co., died recently in New York. Mr. Fraser retired as treasurer of the firm in 1950 after holding the post since the incorporation of Stevens. He is survived by his widow, a son—Kenneth W. Fraser, financial vice-president of Stevens—two daughters and a twin brother.

Harold A. Green, 42, assistant superintendent of the Eagle & Phenix Division of Reeves Bros. Inc., Columbus, Ga., died recently in Columbus. Surviving are his widow, a daughter, a sister and three brothers.

Walter E. Hadley, 76, a charter member and first national secretary of the American Association of Textile Chemists & Colorists, died March 7 at Peterborough, N. H. Mr. Hadley was elected to honorary membership in the A.A.T.C.C. in 1949 in tribute to his service for seven years as A.A.T.C.C. secretary, as well as in other posts, during the association's earlier years. A graduate of Lowell Tech, he taught at L.T.I. for four years. He then joined The Roessler and Hasslacher Chemical Co. as a research chemist, and later went with Clark Thread Co. as chief chemist. In 1934 he joined Standard-Coosa-Thatcher Co., Chattanooga, Tenn., as superintendent of dyeing, bleaching and mercerizing. He remained with S-C-T until his retirement in 1944. Survivors include his widow, a son, a daughter, a sister and three grandchildren.

John Oliver Hunt, 71, president of Southern Loom Development Co., Greenville, S. C., and holder of a number of patents in the textile and other industries, died last month in Greenville. Mr. Hunt for many years did experimental work for Chicopee Mfg. Co. at New Brunswick, N. J. In 1939 he joined Riegel Textile Corp. at Ware Shoals, S. C., in a similar capacity. In 1942 he moved to Greenville where he acquired the Mountain City Foundry and Machine Works, which later became Hunt Loom and Machine Works. He was president of that firm when it was acquired by Abney Mills. He then founded Southern Loom Development Co. Surviving are his widow, a son and two sisters.

Edwin R. Jerome, 62, former president and general manager of the Victor Ring Traveler Division of Saco-Lowell Shops, died last month at his home in Cranston, R. I. Mr. Jerome joined Victor Ring in 1910 as office boy. He became a sales representative in 1919, sales manager in 1927, vice-president and general manager in 195[illegible], and president and general manager in 1952. He retired for reasons of health in 1956. His widow and two sons survive.

Adrian L. Shuford Sr., 72, textile executive and banker, died Feb. 24 at Newton, N. C., following a year of failing health. A native of Hickory, N. C., Mr. Shuford at the time of his death was senior adviser to the Riegel Textile Corp. He served from 1940 to 1950 as president of the Work Glove Institute. He founded Warlong Glove Mill in 1917 and participated in the founding of Conover (N. C.) Knitting Co. in 1928. Until Riegel acquired Warlong Glove in 1956, Mr. Shuford had served as president of that firm. His son, A. L. Shuford Jr., is president of Conover Knitting, and is past board chairman of the National Association of Hosiery Manufacturers. In addition to A. L. Jr., the senior Mr. Shuford is survived by his widow, three daughters and another son, Dr. Henry Shuford of Durham, N. C.

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MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

LINCOLNTON, N. C. — Massapoag Mills Corp., which has been in operation for about 30 years producing cotton ducks, has closed. The plant formerly employed 140 persons. Future plans for the building and equipment are indefinite.

GREENVILLE, S. C.—Woodside Mills is modernizing its spinning by conversion to Whitin Super-Draft. The modernization program involves 283 Whitin Model F2 spinning frames. Of the total, 117 frames are in Greenville, 60 frames are in Mill No. 2, Liberty, S. C., and 52 frames are in Mill No. 3, Liberty, S. C.

SPARTANBURG, S. C.—Reeves Bros. Inc. has bought the 80,000-square-foot plant of Fairmont Mills, which has been closed for two years, for an undisclosed price. F. G. Atkinson has been named superintendent of the plant which will go into production immediately, according to Charles D. Green, vice-president in charge of Reeves Southern operations. The plant will produce plastic yarns and will employ some 75 persons.

CONCORD, N. C.—Brown Mfg. Co., an affiliate of Cannon Mills Co., has purchased an initial installation of Unifil Loom Winders produced by the Universal Winding Co. The exact number of winders involved was not made known but Universal stated that it is the first order for Unifil Loom Winders purchased for use on new looms.

HUNTSVILLE, ALA. — A group of local businessmen has purchased the plant and properties of Lincoln Mills of Alabama. The purchase includes five buildings, a total of more than 800,000 square feet of floor space, and in addition, approximately 27 acres of land. The purchase price was not disclosed. Lincoln Mills, which normally employed about 1,000 persons, was closed recently because of "deteriorating market conditions," according to officials of the company. A. D. Elliott, a former textile executive, is president of the group of businessmen making the purchase who have incorporated as the Huntsville Industrial Associates Inc. Comer Machinery Co. of Charlotte, N. C., and Atlanta, Ga., is handling the sale of machinery which is valued in excess of $4 million. The new owners will lease the buildings.

BLACKSBURG, S. C.—The Dodgeville Finishing Co. of Attleboro, Mass., has purchased the former Broad River Mills plant here. Fred B. Hirsch, general manager, said the company planned to spend an initial $200,000 for new equipment for the plant which will process synthetic marquisettes in durable finish. The plant will employ around 80 persons for the present, but will be eventually expanded to 150 employees. Mr. Hirsch reports present plans are to process a half-million yards per week, but to have an ultimate capacity of one million yards per week.

DYERSBURG, TENN. — Dyersburg Cotton Products Inc. is in the process of erecting ten new Saco-Lowell SG-1 spinning frames as a part of its long range modernization program. Also slated for installation in April are two Whitin high-speed, large-can drawing frames and the conversion of one line of cards to use 15x42-inch roving cans. Last year Dyersburg put ten Saco-Lowell SG-1 and 16 Whitin Model F-2 spinning frames into production.

SPRAY, N. C.—Fieldcrest Mills Inc. has let contracts for the construction of a new 42,500-square-foot office building. In announcing the building plans, President Harold W. Whitcomb said the new central office will release 30,000 square feet of space which is badly needed for manufacturing purposes. Additional advantages will be gained by more efficient operation resulting from the consolidation of the company's staff departments and office operations. Total contracts for the building are reported to be slightly in excess of $800,000. Robert & Co. Associates of Atlanta, Ga., are the architects.

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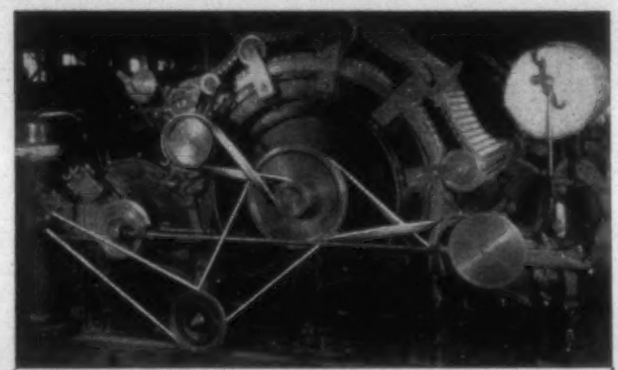

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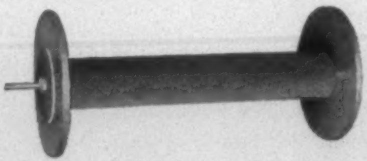

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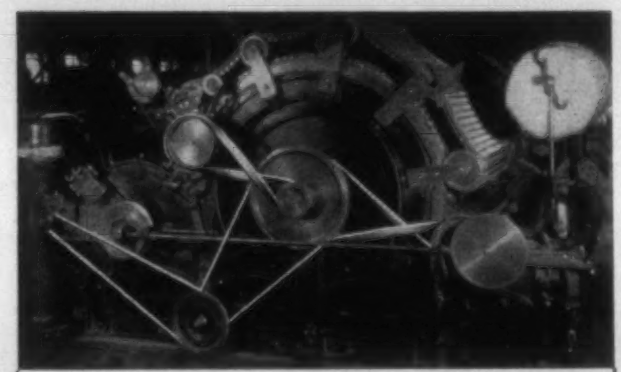

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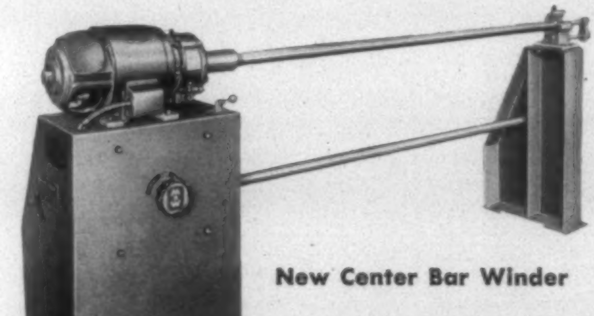

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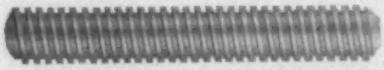

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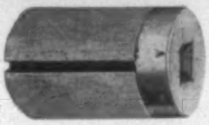

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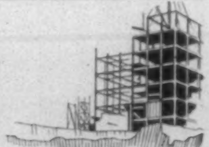

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Creslan—The development of Creslan acrylic fiber in tow form is currently under way, according to C. W. Bendigo, technical director of American Cyanamid Co.'s fiber division. Creslan is presently being produced in staple form in a prototype pilot plant at the company's research plant in Stamford, Conn. Full scale production is planned for late next year when American Cyanamid will complete the construction of a new plant near Pensacola, Fla. Mr. Bendigo discussed Creslan's dyeability, comparing the different classes of dyes as to fastness to light, perspiration, wash and crocking. Dyes which have been successful when used with Creslan-wool unions were listed by Mr. Bendigo as acid, acid, metalized, neutral metalized, chrome and milling. Costs of Creslan-wool unions were also compared. The speaker emphasized the belief that Creslan has a particular advantage in lower cost for the darker shades, especially when fastness is considered. Also emphasized was the fact that Creslan processes well on equipment that has been found satisfactory for other acrylic fibers.

Darlan—The current merchandising program for Darlan, the new dinitrile fiber of B. F. Goodrich Chemical Co., is concentrated on developing specific applications where the fiber can be translated into unique fabrics. R. D. Smith of B. F. Goodrich noted that the company had made known no decision as yet concerning plans to enlarge the present semi-works production to a full-scale commercial plant. He revealed that the polymer used for the preparation of Darlan staple fiber, as now produced, is a copolymer of vinylidene dinitrile and vinyl acetate. Mr. Smith said that although Darlan has ample affinity for some classes of dyestuff, the dye diffusion rate was such that dye carriers or high temperatures must be used to speed up the process. Some success recently in converting tow into bulky yarns by way of the Turbo-Perlok system was reported. The differential shrinkage attained is considerably less than that of the acrylics but it is apparently enough to give a somewhat lofty yarn.

Verel—Harry W. Coover Jr., Tennessee Eastman Co., Kingsport, Tenn., presented a paper concerning the properties of Verel fiber. In discussing dyeing, the ability of the Verel fiber to be dyed at normal operating temperatures rather than at a boil or under pressure was emphasized. Production of stabilized and unstabilized types provides means of getting varied bulk. These types can be used to produce high bulk fabrics, using conventional equipment, the speaker said. Among other uses noted, the speaker said that in men's wear, particularly flannels, the fiber when properly blended with medium wool, would allow higher spinning limits, the object being to counteract the wiriness of the wool and produce a fabric with an improved hand. Higher moisture regain of the fiber was emphasized as contributing to comfort in all end-uses and particularly in blends with wool and cotton for socks.

Dynel—A major new use for Dynel fiber has been opened in veiling or overlay material in the making of low-pressure, glass reinforced, resin laminates, according to J. M. Swalm of Carbide & Carbon Chemicals Co. The Dynel overlay may be applied to only one side or both sides of the laminate, in the form of woven or non-woven fabrics, said Mr. Swalm. Improved chemical and abrasion resistance is said to be imparted to such end-use products as chemical tanks and pipes, fume ducts, boats and others in view of the fact that the fiber structure wets exceptionally well with resin. This exceptional wetting results in a resin-rich surface. The chemical resistance of the fiber, it was revealed, allows an entre into what is described as the solid and unspectacular filter fabrics field. Related uses were listed as including dust fume bags, air filters, anode bags and battery separators. Carpet Dynel, or type 77, is expected by its producer to be an important factor in the floor coverings field. It is said to have been well received at the Chicago Home Furnishings Show in January.

Orlon—Continuous dyeing and finishing of blends of Orlon acrylic fiber with cotton or rayon are not far off, said W. W. Heckert of E. I. du Pont de Nemours & Co. Inc., Wilmington, Del. Some experimental dyeing had been carried out in a semi-works unit in which basic dyes have been applied to Orlon in 80/20 blends with cotton, he said. Details of this process will be disclosed in May of this year. Mr. Heckert also explained the principle of bulking whereby various Orlon woven fabrics can be engineered with varying qualities for a host of end-uses. The speaker gave as an example the use of low-shrinkage fibers of low denier, blended with high-shrinkage fibers of high denier. It is possible to spin yarns which, after boil off, will have a high concentration of low denier fibers in the surface and of high denier fibers in the core. This method may be used to produce fabrics having a very soft, luxurious hand due to the low denier fibers in the surface of the fabric and improved liveliness due to high denier fibers present in the core. Within certain limits, Mr. Heckert added, the principle can be extended to blends of other fibers, both natural and synthetic, with Orlon.

Zefran—Dr. G. W. Stanton, who heads the textile fibers research for Dow Chemical Co., revealed the first extended information about Zefran, Dow's new synthetic textile fiber. The company will produce Zefran in commercial quantities next year. Dr. Stanton characterized the new fiber as a "nitrile alloy." He described contrasts between an alloy and a copolymer having the same constituents as the alloy. Such copolymers are usually referred to as "acrylics." Dr. Stanton said that one of the most pronounced differences between the two shows up in dyeability. He said that the anthraquinone vat dyestuffs show excellent build-up on the Zefran alloy and poor build-up on the acrylic copolymer. In his presentation, Dr. Stanton said the alloy structure is essentially a continuous polyacrylonitrile backbone which is hydrophobic, containing discrete areas of a hydrophilic, dye-receptive polymer. The close packing of the hydrophilic groups provides an atmosphere of the right cohesive energy density for tightly complexing dye molecules not provided in a copolymer. This is particularly noticeable with vat, naphthol and sulfur dyestuffs, and, at the same time, the hydrophobic backbone remains intact to provide improved thermal properties, he added. Dr. Stanton pointed out that, in spite of the fact that Zefran has a higher water absorption, after ten hours in boiling water-shrinkage test, the Zefran fiber had shrunk less than two per cent while the copolymer had shrunk over 12 per cent. He said that Zefran has been handled on all conventional textile equipment with very good results. The sharp, durable crimp in the fiber, he said, combined with selected processing finishes permits high volume output on most equipment with good product uniformity. He added that more than a hundred different potential end-uses have been investigated on a development scale, using pilot plant-produced Zefran. In

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the textile areas where the fastness properties of vat dyestuffs are required in combination with wrinkle recovery, crease retention, low shrinkage, and general ease-of-care, Zefran has much to offer, he concluded.

N.A.W.M. Annual Meeting Set For May 9th

The 92d annual meeting of the National Assciation of Wool Manufacturers will be held Thursday, May 9th, in the Waldorf-Astoria Hotel, New York City. The program will include the regular business session, with election of officers and directors, luncheon and dinner.

A.A.T.C.C. Council To Meet In Roanoke

Special research reports of interest to the textile industry in the South will be featured at a March 30 joint research meeting of the technical committee on research of the American Association of Textile Chemists & Colorists, and the Piedmont Section of the association, to be held Saturday, March 30, in the Roanoke Hotel, Roanoke, Va.

This special research session is part of a three-day group of meetings in Roanoke March 28-30, including the Piedmont Section's annual Spring meeting, and (at the invitation of the section's officers) meetings of the A.A.T.C.C. council and national committees.

The Saturday research session will include opening remarks by Charles A. Sylvester, the Du Pont Co., chairman of the A.A.T.C.C. technical committee on research; George O. Linberg, of Synthron Inc., president of the association; and Dr. Harold W. Stiegler, director of research of the A.A.T.C.C.

The research session will include reports by: Dr. George S. Wham of *Good Housekeeping*, discussing recent developments in "Wash and Wear"; R. B. Smith of New Jersey Laundry and Cleaning Institute, on recent developments in "Colorfastness to Washing"; Joseph E. Norton of Atlas Electric Devices Co., "Colorfastness to Light"; Richard F. Aurich, Joseph Bancroft & Sons Co., "Damage Caused by Retained Chlorine"; and J. H. Warner, D. B. Fuller & Co. Inc., "Dimensional Changes in Textile Fabrics."

A special speaker at the regular technical session of the Piedmont Section's meeting, also on Saturday, will be Dr. Irving A. Bernstein, Tracerlab Inc., on "Use of Radio-Active Tracer Chemicals in Wet Processing."

National committees of the A.A.T.C.C. council will meet Thursday afternoon and evening, March 28. A.A.T.C.C. research committees will hold their meetings on Friday, March 29, as will the A.A.T.C.C. council.

Registration for the Piedmont Section Spring meeting

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will be held Friday afternoon and all day Saturday. Closing the three-day period will be a social hour and section banquet, at which Dave Morrah, author, cartoonist, humorist and creator of "Herr Heinrich Schnibble" of *Saturday Evening Post* fame, will talk on "Humor in Industry."

Spring Meeting, T.Q.C.A., March 28-29

The Spring meeting of the Textile Quality Control Association will be held at the Clemson House, Clemson, S. C., on Thursday and Friday, March 28 and 29. According to Ashley B. Roberts of China Grove (N. C.) Cotton Mills Co., association president, the program for the meeting will include the following papers:

"Opening and Picking Evaluation," Woodbury K. Dana, Saco-Lowell Shops; "Improved Cleaning Equipment," Ralph Rusca, Southern Regional Research Laboratory; "Modern Opening and Cleaning," Larry Orr, Whitin Machine Works; "Effects of Modern Cotton Harvesting and Ginning on Quality Control," A. P. Aldrich Jr., Aldrich Machine Works.

"Fiber's Contribution to Yarn Strength," John F. Bogdan, North Carolina State College School of Textiles; "Mill Experience in Full-Scale Changeover to Metallic Clothing," Joseph L. Delany, Joanna (S. C.) Cotton Mills Co.; "Quality of the 1956 Cotton Crop," William H. Fortenberry, U. S. Department of Agriculture; and "Trouble Shooting in Spinning Mills," W. A. Thomason, Thomason Textile Service.

The meeting will also feature the election of officers for 1957-58. The slate to be recommended by the group's nominating committee includes, for president, Kelly Waits, Joanna Cotton Mills Co.; for vice-president, Ray Gordon, Kendall Mills Co.; for secretary, Bob Miraldi, National Cotton Council; and for treasurer, Elvin Bond, United States Rubber Co.

To be nominated for the board of governors, terms expiring in 1958: Dent Mangum, North Carolina State College School of Textiles; Eric Weyl, textile consultant; and Sam King, Limestone Mfg. Co. For terms expiring in 1959: Roger Jackle, North Carolina State College; Bill Esslinger, Orr Mills; Luke Thomason, textile consultant. For terms expiring in 1960: Paul Moran, P. H. Hanes Knitting Co.; Emmett Bringle, National Cotton Council; and Mr. Roberts, outgoing president.

New Water Waste Gauge Revealed

A new instrument to measure color of river water will be demonstrated at the sixth annual Southern Municipal and Industrial Waste Conference at North Carolina State College, April 1-2. Dr. Nelson L. Nemerow, chairman of the conference committee, revealed that the device had been under development in an effort to work out ways and means of taking color out of waste water before it reaches the streams. Dr. Nemerow said the principle of the in-

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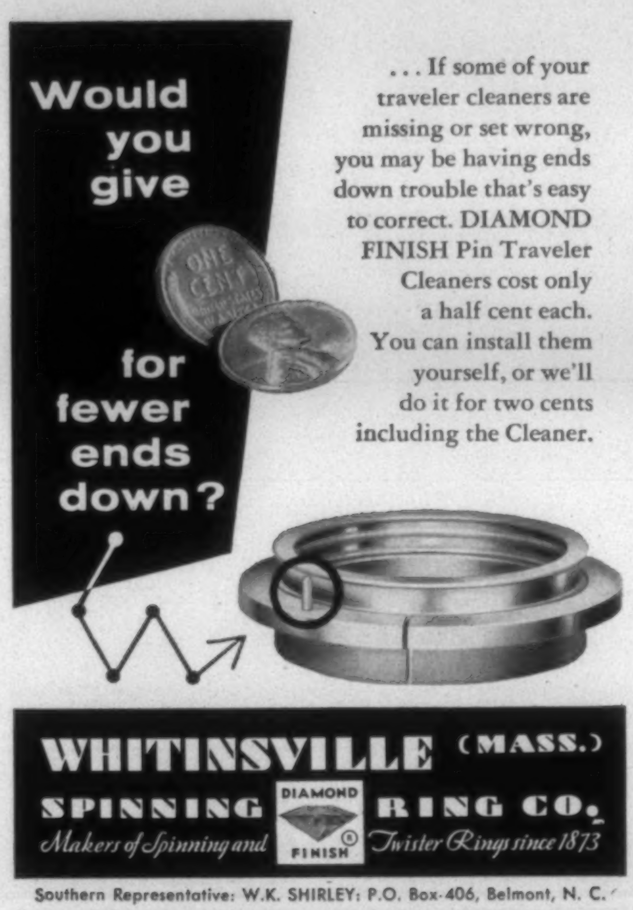

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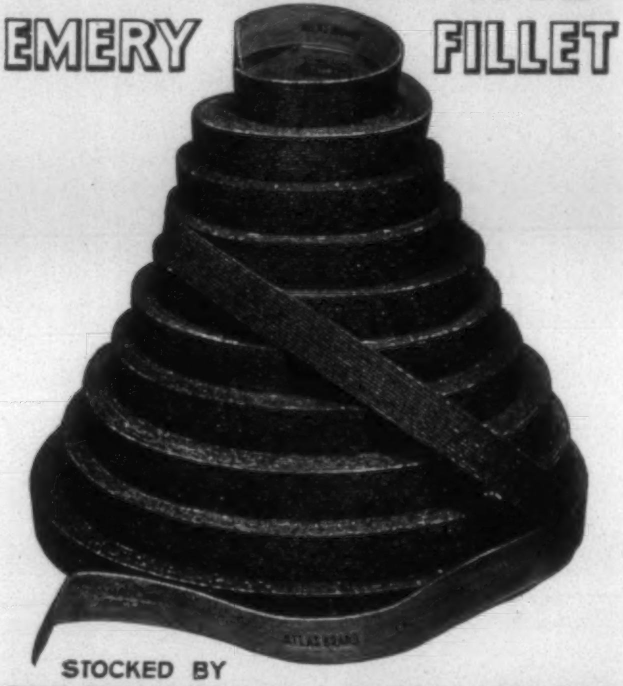

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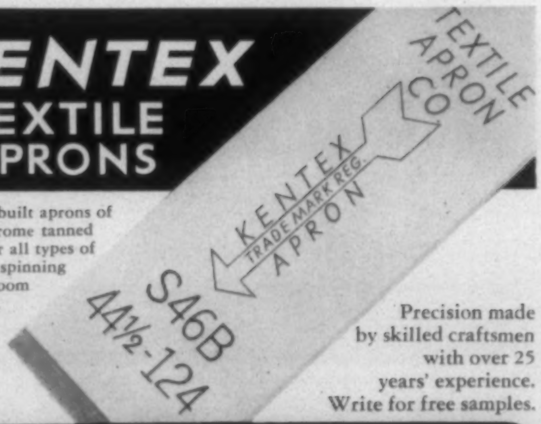

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More experimentation remains, Dr. Nemerow explained, but the work is far enough along to acquaint textile delegates to the conference with its operation. "The chart is being developed on the basis of psychological data," Dr. Nemerow said. "Each color is being studied and an answer is being sought to convey how much color is objectionable."

Among other speakers invited to the meeting is Vernon Wilkerson, Rock Hill (S. C.) Finishing Co., who will discuss the economics and efficiency of the recovery of caustic soda from dyeing, kiering and mercerizing. Senator Wayne Morse (D.-Ore.) will speak on water conservation measures at the conference.

Textile Deans Hold Annual Meet

The National Council for Textile Education held its annual meeting in mid-March at the Hotel du Pont in Wilmington, Del. The group held its meeting as guests of E. I. du Pont de Nemours & Co. Those in attendance at the meeting included: Cleveland L. Adams, head, School of Textile Technology, Alabama Polytechnic Institute, Auburn, Ala.; Stanley Backer, professor, Massachusetts Institute of Technology, Cambridge, Mass.; Dr. Hugh M. Brown, dean, School of Textiles, Clemson College, Clemson, S. C.; Malcolm E. Campbell, dean, School of Textiles, North Carolina State College, Raleigh, N. C.; Leslie B. Coombs, president, Bradford Durfee Technical Institute, Fall River, Mass.; Dr. Herman A. Dickert, director, A. French Textile School, Georgia Tech, Atlanta, Ga.; Dr. William D. Fales, dean, School of Textiles, Rhode Island School of Design, Providence, R. I.: Raymond K. Flege, head, department of textile engineering, Texas Tech, Lubbock, Tex.; James Giblin, dean, New Bedford Institute of Textiles, New Bedford, Mass.; Dr. L. H. Hance, president, Institute of Textile Technology, Charlottesville, Va.; Dr. Bertrand W. Hayward, president, Philadelphia Textile Institute, Philadelphia, Pa.; Dr. Martin J. Lydon, president, Lowell Tech, Lowell, Mass.; Edward T. Pickard, Kent, Conn., of Textile Research Institute; and Charles Edlund, Lowell Tech, Lowell, Mass.

A prevalent opinion among the deans is that there are still too many important textile executives who are not familiar with what the textile colleges are doing, nor with the courses they are teaching. Not only do the deans have the problem of indifference to textile education in a number of industry centers, but they also find it difficult to cope with the thinking of those executives who say openly that they have preference for graduates of liberal arts colleges. It is a fact also that mill executives don't agree among themselves on the courses that should be given by the textile colleges. The deans heard Norman H. Winde, of the Du Pont Co., speaking for personnel, emphasize the firm's policy of training from within, and transferring men from one job to another to broaden their experience so they can contribute more to the company effort. We want to obtain college graduates with good, fundamental education, Mr. Winde said.

The textile school deans adopted a resolution urging the American Cotton Manufacturers Institute to finance a motion picture which would have a title something like "Careers in Textiles," and which would be planned for widest possible distribution. The resolution reads, in part, "Be it hereby resolved that A.C.M.I. be urgently requested to implement the work of its textile education committee, so well begun, by appropriating such funds as may be necessary so that the production of a motion picture which will be a representation of the opportunities for careers in the textile industry which will be of interest to the young people, parents, educators and to all persons connected with the textile and related industries can be made generally available."

Appalachian A.A.T.T. Elects Officers

About 80 people from a three state area were in attendance at Kingsport, Tenn., as Gerard K. Lake, president of the American Association for Textile Technology, presented the organizational charter to the newly-organized Appalachian Chapter, the first regional group of the parent organization.

Fred E. Anderson of the North American Rayon Corp. was elected chairman of the new chapter. Other officers elected include W. G. Faw, Tennessee Eastman Co., first vice-chairman; Dr. Arthur Creswell, North American Rayon, second vice-chairman; Dr. Carl Wooten, Tennessee Eastman Co., treasurer; and Harold A. Thompson, Tennessee Eastman Co., secretary.

Clifford Karnes, head of quality control for Burlington Industries, spoke on "The All-Functional Fiber Required for the Textile Industry." Mr. Karnes' talk dealt with strength of fiber (wet and dry), swelling characteristics, necessary elongation and toughness, geometric properties and moisture regain. "The eliptical cross-section will probably give the best theoretical returns in strength of yarns from functional fibers," Mr. Karnes said, "as this will probably give less slippage and be able to maintain maximum fiber strength in yarns produced from it."

Other companies represented were: American Bemberg, Borden Mills and Burlington Mills. Next meeting of the group has been set for May 9 at Elizabethton, Tenn. Meetings slated for the second Thursday in October and the first Thursday in December will round out the year's activities.

A.C.M.A. Annual Meeting, April 10-12

Dwight M. Wilhelm, executive vice-president, has announced that the Alabama Cotton Manufacturers Association will meet April 10-12 for its 1957 convention at the Buena Vista Hotel, Biloxi, Miss. One of the highlights of

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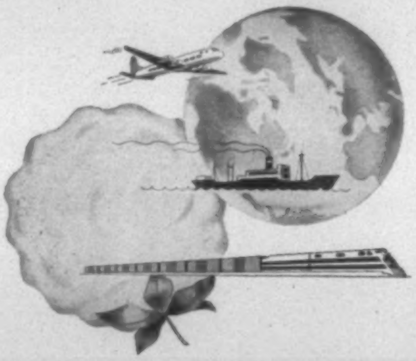

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the meeting will be a talk by Frank Constangy, Atlanta attorney representing management in labor relations. Mr. Constangy will speak on "Labor Relations Problems in the Textile Industry—a Review and Forecast." Another speaker featured at the meeting will be Lyman C. Conger, chairman, management committee, Kohler Co., Kohler, Wis., whose subject will be, "Coercion—a Threat to America."

The first business session will get under way Thursday, April 11, at 2 p.m. with R. C. Moyer, manager, The Linen Thread Co. Inc., Blue Mountain, Ala., A.C.M.A. president, presiding. This will be followed by reports of the cotton improvement, public relations, Alabama Textile Operating Executives, tar spot, traffic and Alabama Textile Education Foundation committees. The committee reports are to be followed with the election of officers and directors for 1957 and 1958.

The welcome party and old-fashioned county fair, always highlights of the A.C.M.A. convention, will be held Thursday evening with F. M. Lyon, president of Opp-Micolas Cotton Mills, Opp, and a vice-president of A.C.M.A., as master of ceremonies.

Fred F. Phillips, president, Buck Creek Cotton Mills, Siluria, and chairman of the A.C.M.A. board, will preside at the second business session Friday, April 12, when Hugh Comer will present safety awards to winners in the past year's contest. E. R. Lehmann, West Point (Ga.) Mfg. Co., will make the treasurer's report and Frederick Moore, Florence Cotton Mills, Florence, will report for the resolutions committee. These reports will be followed by Mr. Constangy and Mr. Conger.

Friday afternoon the golfers will vie for the George H. Lanier Trophy at the Great Southern Golf Course near Gulfport, Miss. There will be horseshoe pitching for non-golfers with Mr. and Mrs. D. Hamp Morris 3d in charge. Mr. Morris is president of Geneva Cotton Mills at Geneva.

Mr. Moyer will be toastmaster at the banquet Friday evening when Miss Sandra Joy Kelley of Huntsville, Alabama's 1957 Maid of Cotton, will be presented. Leo Aikman, *The Atlanta Constitution,* Atlanta, Ga., will be the speaker.

January Cotton Consumption Off From 1956

The Census Bureau reports that January 1957 had an average daily cotton consumption of 33,623 bales. This figure is 3,891 bales off the average daily total for January 1956, which was 37,514 bales. It was further reported that 31,575 bales of cotton were consumed per working day in December 1956. January had 25 working days while January 1956 and December 1956 had 20 working days.

The seasonally adjusted daily average cotton consumption index for January 1957 was 96 compared with 107 in January 1956 and 98 in December 1956. Total consumption of cotton in January 1957 climbed to 840,567 bales from 750,282 a year ago and 631,507 a month earlier.

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Roy & Son Co., B. S. —

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Saco-Lowell Shops 28
Scott Testers, Inc. 103
Seydel-Woolley & Co. —
Sims Metal Works —
Sinclair Refining Co. 15
Solvay Process Div., Allied Chemical
  & Dye Corp. 107
Southern Engineering Co. 98
Sonoco Products Co. 53
Southern Shuttles Div. (Steel Heddle Mfg. Co.) —
Southern States Equipment Corp. —
Staley Sales Corp., A. E. —
Steel Heddle Mfg. Co. and Southern
  Shuttles Div. —
Stein, Hall & Co., Inc. (Textile Dept.) —
Stover Co., Charles G. 105

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Taylor & Co., R. M. —
Tennessee Corp. 64
Terrell Machine Co., Inc., The —
Texas Co., The 58
Textile Apron Co. 103
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Thomaston Mills —
Trust Co. of Georgia —
Turner & Chapman 10

—U—

U S Bobbin & Shuttle Co. —
U. S. Ring Traveler Co. —
Universal Winding Co. 1
Uster Corp. —

—V—

Valentine Co., J. W. 10
Veeder-Root, Inc.
Victor Ring Traveler Co. 7

—W—

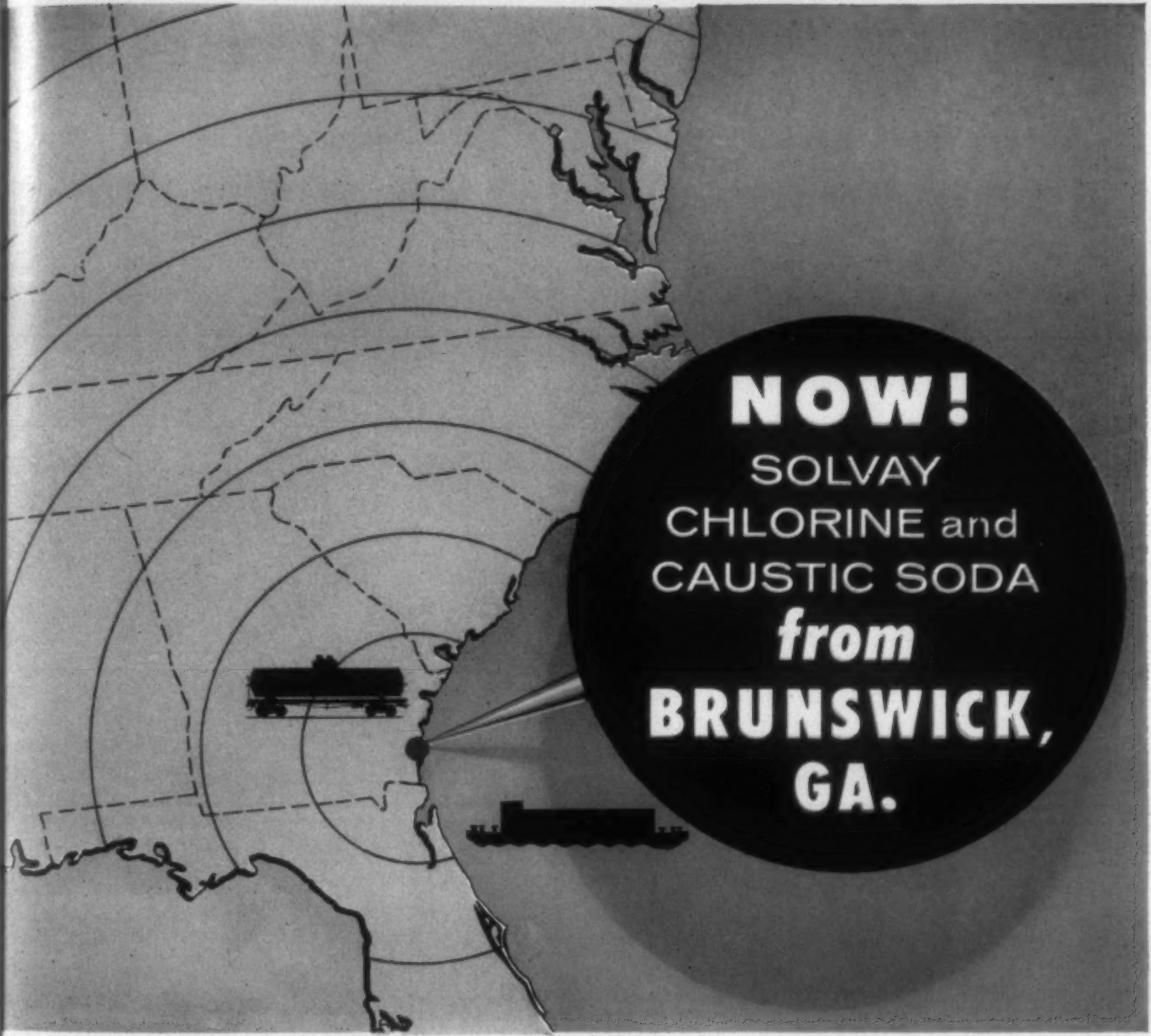
WAK Industries 37
Watson & Desmond —
Watson-Williams Mfg. Co. —
West Point Foundry & Machine Co. Back Cove
Westvaco Mineral Products Div. —
Whitin Machine Works 12 & 1
Whitinsville Spinning Ring Co. 10
Wood's Sons Co., T. B. —
Wolf & Co., Jacques —

—Y—

Yeomans Textile Machinery Co. 50

You know those rare days when *everything's* right? Air smells good. Food tastes terrific. Even the old face looks good in the mirror. *Today* can be that kind of day. Just do two things. Call your doctor for a thorough medical checkup for cancer. Then write out a check—a nice fat one—to the American Cancer Society, and mail it to "Cancer" in care of your local Post Office.

AMERICAN CANCER SOCIETY



Newest Solvay plant means lower costs ... faster service for Southern users

The addition of Brunswick, Ga. as the newest of SOLVAY's strategically located production centers results in quicker deliveries and lower freight rates for Southeastern chlorine and caustic soda users. Liquid caustic soda will be shipped in tank cars and barges, liquid chlorine in single-unit tank cars. Your nearest SOLVAY branch office will give you information on deliveries from this new SOLVAY source.

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nowflake® Crystals • Sodium Bicarbonate • Soda Ash
mmonium Chloride • Methylene Chloride • Caustic Soda
onochlorobenzene • Ammonium Bicarbonate • Chlorine
rbon Tetrachloride • Methyl Chloride • Chloroform
leaning Compounds • Para-dichlorobenzene • Hydrogen
Peroxide • Ortho-dichlorobenzene

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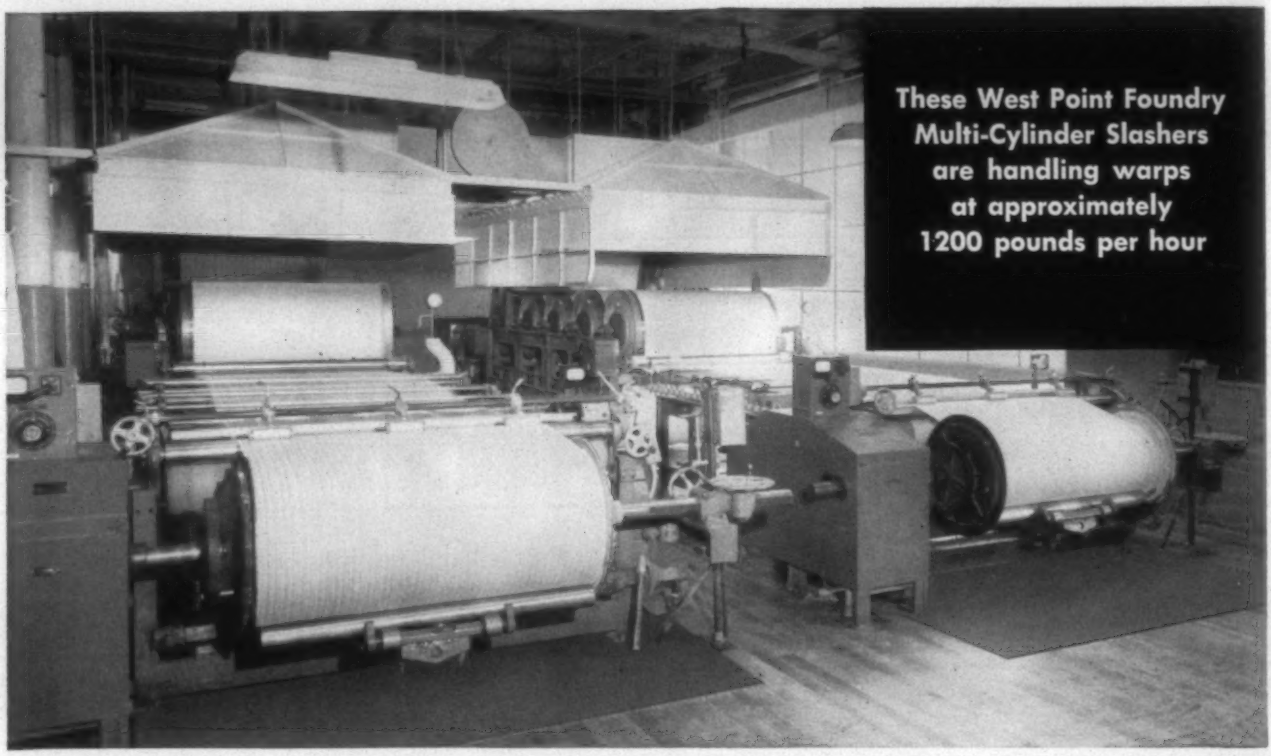
St. Louis • Syracuse

Slash More Warp at Less Cost



These West Point Foundry Multi-Cylinder Slashers are handling warps at approximately 1200 pounds per hour

That's a *typical* drying rate these high producing slashers are turning out in a Georgia mill of one of the largest textile organizations* — 1240 pounds per hour, 5560 ends of 24's cotton at 75 yards per minute. In other mills West Point Foundry MULTI-CYLINDER slashers are slashing warps at speeds up to 230 yards per minute and drying rates 2000 pounds per hour. That's *high production*—the reason why *four* West Point Foundry MULTI-CYLINDER slashers replaced seven of the old 3-cylinder slashers!

**Name furnished on request*

Increase production . . . lower costs

MULTI-CYLINDER SLASHERS already in many mills have cut in half the number of slashers *and the floorspace* needed to handle a mill's production. And they continue to produce for years with dependable, high speed performance. They are built on heavy *machined* CAST IRON frames—built to take it! Another important advantage of the MULTI-CYLINDER SLASHER is its extreme versatility. It does an outstanding job on cotton, spun and filament synthetics. Teflon coating on entering cylinders makes it completely applicable to cotton. Multiple cylinders permit graduated temperature controls when required for synthetic warps. Superior *control of tension* throughout the slasher and *steam economy* are two more profit-making features. THIS SLASHER IS A MONEY-MAKER!

Remember—you have a choice with West Point, because West Point Foundry makes both MULTI-CYLINDER and AIR-DRI® Slashers

For complete details, write

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Foundry & Machine Company

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